

# Full-Scale S-76 Rotor Performance and Loads at Low Speeds in the NASA Ames 80- by 120-Foot Wind Tunnel

## Volume 1

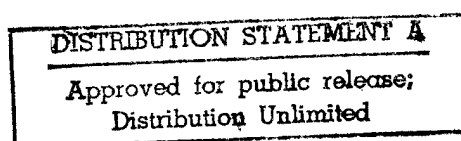
Patrick M. Shinoda

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National Aeronautics and  
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US Army  
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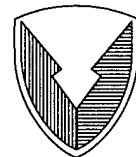
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## Nomenclature

A	rotor disk area, $\pi R^2$ , ft <sup>2</sup>
ALFS, U, $\alpha_s$	rotor shaft angle, positive aft of vertical, deg
AF	balance axial force, balance moment center, positive aft, lb
b	number of rotor blades
c	mean blade airfoil chord length, ft
CLRH/S	rotor wind-axis lift coefficient divided by rotor solidity, positive up, $LIFTH, C / \rho(\Omega R)^2 S_R$
CP	rotor power coefficient, $POW / A_p(\Omega R)^3$
CP/S	rotor power coefficient divided by rotor solidity, $POW / \rho(\Omega R)^3 S_R$
C <sub>S</sub>	speed of sound, ft/s
CTH, C <sub>T</sub>	rotor thrust coefficient, perpendicular to tip-path-plane, positive up, $THRUST / A_p(\Omega R)^2$
CTH/S, C <sub>T</sub> /σ	rotor thrust coefficient divided by rotor solidity, positive up, $THRUST / \rho(\Omega R)^2 S_R$
CXRH/S	rotor wind-axis propulsive coefficient divided by rotor solidity, positive forward, $-DRAGH, C / \rho(\Omega R)^2 S_R$
DRAGH, C	rotor wind-axis drag, positive downstream, lb
FMERIT, F <sub>M</sub>	Figure of Merit, $CTH^{3/2} / CP^*(2)^{1/2}$
LIFTH, C	rotor wind-axis lift, positive up, lb
MTIP	rotor tip Mach number, $\Omega R / C_S$
n	nth harmonic
NF	balance normal force, balance moment center, positive up, lb.
OMEG*R	rotor tip speed, $\Omega R$ , ft/sec
POW	rotor shaft power, $TORQ, C * \Omega$ , ft-lb/s

PM	balance pitching moment, balance moment center, positive nose up, ft-lb
QPSF	free stream dynamic pressure, lb/ft <sup>2</sup>
R	rotor radius, ft
RHO, ρ	free stream air density, slugs /ft <sup>3</sup>
RM	balance rolling moment, balance moment center, positive right wing down, ft-lb
RPM	rotor rotational speed, rev/min
SF	balance side force, balance moment center, positive starboard, lb
S <sub>R</sub>	rotor blade area, bcR, ft <sup>2</sup>
THRUST	rotor thrust, perpendicular to tip-path-plane, positive up, lb
TORQ, C, TQ	flexcoupling or rotor shaft torque, ft-lb
V	free stream velocity, ft/s
VKTS	free stream velocity, kt
V/OR, μ	advance ratio, $V/\Omega R$
X	parameter resultant value in engineering units
X <sub>0</sub>	parameter offset value in engineering units
X <sub>nc</sub>	parameter cosine coefficient of the nth harmonic
X <sub>ns</sub>	parameter sine coefficient of the nth harmonic
YAW	model yaw angle, clockwise relative to tunnel centerline, deg
Σ	summation
σ	rotor solidity, $bc/\pi R$
Ω	rotor rotational speed, rad/s
ψ	blade azimuthal angle, deg

# Full-Scale S-76 Rotor Performance and Loads at Low Speeds in the NASA Ames 80- By 120- Foot Wind Tunnel

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## Summary

A full-scale helicopter rotor test was conducted in the NASA Ames 80- by 120-Foot Wind Tunnel with a four-bladed S-76 rotor system. Rotor performance and loads data were obtained over a wide range of rotor shaft angles-of-attack and thrust conditions at tunnel speeds ranging from 0 to 100 kt. The primary objectives of this test were (1) to acquire forward flight rotor performance and loads data for comparison with analytical results; (2) to acquire S-76 forward flight rotor performance data in the 80- by 120-Foot Wind Tunnel to compare with existing full-scale 40- by 80-Foot Wind Tunnel test data that were acquired in 1977; (3) to evaluate the acoustic capability of the 80- by 120-Foot Wind Tunnel for acquiring blade vortex interaction (BVI) noise in the low speed range and compare BVI noise with in-flight test data; and (4) to evaluate the capability of the 80- by 120-Foot Wind Tunnel test section as a hover facility. The secondary objectives were (1) to evaluate rotor inflow and wake effects (variations in tunnel speed, shaft angle, and thrust condition) on wind tunnel test section wall and floor pressures; (2) to establish the criteria for the definition of flow breakdown (condition where wall corrections are no longer valid) for this size rotor and wind tunnel cross-sectional area; and (3) to evaluate the wide-field shadow-graph technique for visualizing full-scale rotor wakes. This data base of rotor performance and loads can be used for analytical and experimental comparison studies for full-scale, four-bladed, fully articulated rotor systems. Rotor performance and structural loads data are presented in this report.

## Introduction

Wind tunnel testing has been extensively used in the development and improvement of rotorcraft designs, in addition to providing a data base for refinement of theoretical predictions. However, no rotor test (flight tests, small-scale rotor wind tunnel tests, and specifically full-

scale rotor wind tunnel tests) has provided the necessary data in the low speed flight regime (below 60 kt) to validate prediction codes.

The Sikorsky Aircraft S-76 is one of the more thoroughly tested rotor systems, having undergone small-scale and full-scale wind tunnel testing in addition to flight testing. A full-scale test of the S-76 rotor system in the NASA Ames 40- by 80-Foot Wind Tunnel was performed and documented during the developmental phase of the rotor system (ref. 1). There also have been small-scale forward flight wind tunnel data and flight test data acquired by Sikorsky, along with isolated rotor full-scale hover data acquired with this rotor system at the Sikorsky Whirlstand Hover Facility and NASA Ames 40- by 80-Foot Wind Tunnel (ref. 2). In all these tests, however, no data were acquired in the speed range between zero and 60 kt.

To expand the existing S-76 data base and to investigate rotor performance and loads in the low speed (0 - 60 kt) flight regime, a full-scale S-76 rotor test was conducted at the NASA Ames 80- by 120-Foot Wind Tunnel. This wind tunnel test established a data base of rotor performance and loads for the 0 - 100 kt velocity range at various shaft angles and thrust conditions.

The primary objectives of this test were (1) to acquire forward flight rotor performance data for comparison with analytical results (ref. 3); (2) to acquire S-76 forward flight rotor performance data in the 80- by 120-Foot Wind Tunnel to compare with existing (ref. 1) and future 40- by 80-Foot Wind Tunnel data to evaluate differences or similarities between the two full-scale facilities (ref.3); (3) to evaluate the acoustic capability of the 80- by 120-Foot Wind Tunnel for acquiring blade vortex interaction (BVI) noise in the low speed range and compare BVI noise with in-flight test data (ref. 4); and (4) to evaluate the capability of the 80- by 120-Foot Wind Tunnel test section as a hover facility (ref. 3). The secondary objectives were (1) to evaluate rotor inflow and wake effects (variations in tunnel speed, shaft angle, and rotor thrust)

on wind tunnel test section wall and floor pressures (ref. 5); and (2) to establish the criteria for the definition of flow breakdown (point where wall corrections are no longer valid) for this size rotor and wind tunnel cross-sectional area (ref. 5); (3) to evaluate the wide-field shadowgraph technique for visualizing full-scale rotor wakes (ref. 6).

This report documents the test program and presents the rotor performance and loads data for selected test conditions. The rotor, test facility, rotor test stand, instrumentation, data reduction, and test procedures are described. The data from the test are presented in tables and plots. Hover performance data are documented in Appendix A. Forward flight rotor performance data are presented in Appendix B. Forward flight rotor blade structural loads are presented in Appendices C and D.

## **Description of the Experiment**

### **NASA Ames 80- by 120-Foot Wind Tunnel**

The 80- by 120-Foot Wind Tunnel is part of the National Full-Scale Aerodynamics Complex (NFAC) located at the NASA Ames Research Center. The tunnel has an open circuit with a closed, rectangular test section. The maximum test section flow speed is approximately 100 kt. Figure 1 shows a schematic of the wind tunnel circuit. The 80- by 120-Foot Wind Tunnel shares a portion of the flow circuit with the 40- by 80-Foot Wind Tunnel; both tunnels share a single drive system. The drive system consists of six fans rated at 135,000 maximum combined horsepower (101 MW). When operating in the 80- by 120-Foot Wind Tunnel mode, a system of vanes and louvers are positioned so that the 40- by 80-Foot Wind Tunnel circuit is closed off and the 80 x 120 leg forms a through-flow wind tunnel (fig. 1). The drive fans pull outside air in through the 80- by 120-Foot Wind Tunnel inlet and exhaust the air back to the atmosphere through louvers in the tunnel wall downstream of the tunnel fan drive system.

The test section is 80-ft high, 120-ft wide, and 193-ft long. The east wall of the test section has two doors that provide an access opening of approximately 80 ft in height by 120-ft in width. This opening provides room for the tunnel crane to move into the test section for installation of wind tunnel models.

### **General Test Hardware**

The experiment was conducted in the 80- by 120-Foot Wind Tunnel using a production Sikorsky Aircraft S-76 rotor system. The rotor was mounted on NASA's modified Rotor Test Apparatus (RTA). Figure 2 shows

the model installed in the wind tunnel. The Sikorsky Aircraft S-76 rotor system is four-bladed with coincident flap and lag articulation provided at the blade root by elastomeric bearings. Blade pitch is also permitted by the same bearing through the rotor spindle. Table 1 lists the S-76 main rotor parameters. The rotor system, including the hub, spindles, blades, and swashplate, is identical to the production model. Reference 1 provides details on the spanwise distributions of the blade properties, blade airfoil and planform description, airfoil contours, and two dimensional airfoil characteristics.

The RTA is a special-purpose test stand for operating helicopter rotors in the NFAC. The test stand was originally built in the mid-1970's. The RTA houses two-electric drive motors (1500 HP each), a right-angle transmission, a new flexcoupling with a 36,000 ft-lb rotor torque capability and a new rotor balance with 22,000 lb thrust capability (installed in 1991) along with a primary and dynamic control system. The primary control system consists of three electro-hydraulic servo-actuators with an on-board hydraulic system. The dynamic control system is integrated into the primary control system and provides a time-varying perturbation capability to the non-rotating swashplate. The RTA was first built as a symmetrical body of revolution that was 33.3 ft in length with a maximum diameter of 5.83 ft. In 1991, the RTA was modified to incorporate a fairing on top to enclose the raised rotor control system and the new rotor balance. The new fairing on top of the RTA is 15.96 ft in length and has a maximum cross-section (3.5-ft wide by 4-ft tall) located near the rotor shaft.

The RTA was mounted in the wind tunnel on a three-strut (two main struts and one tail strut) support system placing the rotor hub nominally one rotor diameter above the wind tunnel floor. Each front main strut support consists of a 12-ft 80- by 120-Foot Wind Tunnel main strut, 0.5-ft strut adapter, 15-ft 40- by 80-Foot Wind Tunnel main strut, and 5-ft tip (see figures 3a - 3c). The model angle-of-attack was varied by changing the height of the gimbaled tail strut. Rotor collective and cyclic pitch controls were introduced through the swashplate by means of three electromechanical/hydraulic actuators. All data presented in this report were acquired with the first harmonic of the rotor flapping angle trimmed to near zero.

### **Instrumentation And Data Reduction**

The new RTA rotor balance and flexcoupling were used to measure the rotor forces and moments. The RTA rotor balance is a five-component balance that measures rotor lift, drag and side forces, together with the rotor pitching and rolling moments. The balance shares a common centerline with the rotor shaft. The instrumented

flexcoupling measures rotor torque and residual lift force. Both the rotor balance and flexcoupling were designed to measure static and dynamic loads. Table 2 lists the general capabilities and static load accuracies of the rotor balance as measured during the calibration. The resultant hub moment capability depends on rotor hub height above the balance moment center; the higher the hub height, the lower the resultant hub moment capability.

The rotor forces and moments were corrected for aerodynamic tares but not for tunnel wall effects. The tare corrections were experimentally determined to account for the aerodynamic forces on the rotating rotor hub (without blades), shaft, and exposed areas of the control system. These were obtained for tunnel velocities from 0 to 100 knots at a nominal rotor speed of 292 rpm. The aerodynamic tares are described by polynomial equations as a function of tunnel dynamic pressure (QPSF) at specific rotor shaft angles-of-attack ( $\alpha_s$ ) in the balance-axis system in Table 3. The measurement units and positive sign conventions used for the forces and moments are shown in Table 4. These tare reactions were subtracted from the balance forces and moments to obtain the net rotor reactions at the balance-axis system. The net rotor reactions are then transformed from the balance axis system (balance axis has 1.377 deg yaw offset in clockwise direction from rotor hub and wind axis system) to the rotor hub (shaft)-axis system and then into the wind-axis system.

Other instrumentation for this wind tunnel test included nine rotor spindle bending and stress measurements (on one rotor spindle), thirteen blade bending and stress measurements (distributed along one blade), one rotational pitch link load measurement, one blade pitch angle measurement, one blade lead-lag angle measurement, two blade flap angle measurements, two blade damper linear load measurements, one rotating scissors shear load measurement, one non-rotating scissors shear load measurement, three stationary control rod axial load measurements, and standard wind tunnel test section flow measurements. The blade instrumentation is shown schematically in figure 4. Not all of the above measurements are presented in this report. The rotating measurements documented in this report are presented in Table 5 along with the measurement locations, units, and the sign convention.

The signals from the rotating measurements described in Table 5 were sampled and digitized at 64 times per rotor revolution. The data were converted to engineering units using an R-cal step acquired at the beginning of the test run. The time history was smoothed and filtered by eliminating sub harmonics and all harmonics above

20/rev; correction for the Bessel filters in the amplifiers was applied.

## Test Procedures and Test Envelope

The test conditions were obtained by establishing shaft angle, rotor tip Mach number, rotor advance ratio  $\mu$  (tunnel velocity divided by rotor tip speed,  $\Omega R$ ), rotor thrust, and by adjusting cyclic pitch to minimize the rotor first harmonic flapping to within 0.2 deg. Three basic test conditions were investigated. These were hover (YAW = 0 deg, 90 deg), tunnel speed sweeps at specific thrusts and rotor shaft angles-of-attack, and thrust sweeps at specific tunnel speeds and rotor shaft angles-of attack. The full range of test conditions are shown in Tables 6-8. Since the 80- by 120-Foot Wind Tunnel is an open circuit wind tunnel, outside wind conditions can affect the tunnel test section conditions. To alleviate this concern, the majority of the hover and low speed testing was performed when the outside wind speeds were less than 5 kt and the air speed through the test section was less than 4 kt (based on tunnel dynamic pressure measurements).

## Hover Rotor Performance

Hover performance data are presented in tabular form in Appendix A and shown graphically in figures 5 and 6. The rotor control positions presented in Appendix A are based on fixed-system actuator positions. Data are placed into two subgroups; first subgroup is YAW = 0 deg and second is YAW = 90 deg. This corresponds to the two basic hover configurations shown in figure 3b. The first configuration was with the model aligned with the tunnel centerline and facing the tunnel inlet. In this configuration, thrust sweeps were conducted at shaft angles from -15 deg to +15 deg (see Appendix A and figure 5). The second configuration was with the model yawed 90 deg clockwise, with the model nose facing the main tunnel access doors at the east wall (see Appendix A). Figure 6 presents hover performance data for the YAW = 90 deg case. Part of the YAW = 0 deg data are also plotted for comparison. For YAW = 90 deg, the rotor shaft centerline was located approximately 73 ft from the west wall. With the tunnel doors open, an 80-ft high by 120-ft wide opening was provided for the rotor wake to exit the facility. In this configuration, thrust sweeps were conducted at a shaft angle of +15 deg.

## Forward Flight Rotor Performance

Performance data for forward flight thrust and speed sweep conditions with minimized flapping trim are presented in tabular form in Appendix B. Nomenclature

to identify parameters and a data index for locating specific test conditions are also provided within this appendix. Wall corrections were not applied to this data.

Thrust sweep data runs are shown graphically in figures 7-13. Data runs are grouped in terms of increasing rotor advance ratio and shaft angle-of-attack. The data reported are for thrust sweeps with advance ratios ranging from 0.05 to 0.25 and shaft angles from -15 deg to 10 deg.

Speed sweep data runs are grouped in terms of increasing shaft angle-of-attack and thrust conditions. The tabulated data are for speed sweeps at  $C_T/\sigma = 0.065, 0.080, \text{ and } 0.100$  for a rotor shaft angle range of -10 deg to 10 deg. The data are graphically presented in figures 14 - 20. In addition to the speed sweep data, figures 14 - 20 also include specific thrust sweep data. Thus, the ranges of conditions for figures 14 - 20 are  $C_T/\sigma = 0.030$  to  $0.120$  at rotor shaft angles of -15 deg to 10 deg for speeds ranging from 0 to 100 kt.

## Forward Flight Dynamic Loads Data Summary

A summary of dynamic loads data for forward flight thrust and speed sweep conditions with minimized flapping trim are presented in tabular form in Appendix C. Data runs are grouped in terms of increasing rotor advance ratio and shaft angle-of-attack. For each measurement, the time-averaged mean and one-half peak-to-peak value (absolute maximum minus the absolute minimum divided by 2) are presented. Nomenclature to identify parameters, measurement descriptions and locations, and a data index for locating a specific test condition are provided within the appendix.

Thrust sweep data runs are grouped in terms of increasing rotor advance ratio and shaft angle-of-attack. Advance ratios range from 0.05 to 0.25 and shaft angles from -15 deg to 10 deg.

Speed sweep data runs are grouped in terms of increasing shaft angle-of-attack and thrust. The tabulated data are for speed sweeps at three specific thrust conditions ( $C_T/\sigma = 0.065, 0.080, 0.100$ ) for a rotor shaft angle range of -10 deg to 10 deg.

## Forward Flight Detailed Dynamic Loads Data

Detailed dynamic loads data for forward flight thrust and speed sweep conditions with minimized flapping trim are presented in tabular form in Appendix D. For each measurement, the time-averaged mean, one-half peak-to-peak value (absolute maximum minus the absolute minimum divided by 2) are presented. Also, the first twenty harmonics are presented: the harmonics ( $X_{nc}$ ,  $X_{ns}$ ) are defined in the following equation:

$$X = X_0 + \sum (X_{nc} \cos n\psi + X_{ns} \sin n\psi) \quad n=1,20 \quad (1)$$

Eight revolutions of rotor time history data were recorded and used to calculate  $X_{nc}$  and  $X_{ns}$ .

Nomenclature to identify parameters, measurement descriptions and locations, and a data index for locating a specific test condition are provided within Appendix D.

Thrust sweep data runs are grouped in terms of increasing rotor advance ratio and shaft angle-of-attack. Advance ratios range from 0.05 to 0.25 and shaft angles from -15 deg to 10 deg.

Speed sweep data runs are grouped in terms of increasing shaft angle-of-attack and thrust. The tabulated data are for speed sweeps at  $C_T/\sigma = 0.065, 0.080, \text{ and } 0.100$  for a rotor shaft angle range of -10 deg to 10 deg.

## References

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Table 1. General characteristics of the S-76 main rotor

Parameter	Value
Radius	22 ft
Nominal Chord	15.5 in
Nominal twist	-10 deg
Blade Reference Area	113.67 ft <sup>2</sup>
Solidity Ratio	.0748
Number of Blades	4
Airfoils	SC1095 84% outboard SC1095R8 80% inboard
Flapping Hinge offset	3.70% radius
Lock No.	11.6
100% RPM	293
100% tip speed	675 fps

Table 2. RTA Rotor balance capabilities and static load accuracies at the balance moment center

Measurement Parameters	Maximum Capacity	Measured Standard Deviation of Error	
		Value	% Capacity
Normal Force or Lift (NF), lb	22,000	25	0.12
Side Force (SF), lb	4,400	7	0.16
Axial Force or Drag (AF), lb	4,400	12	0.27
Pitching Moment (PM), ft-lb	57,833	27	0.05
Rolling Moment (RM), ft-lb	57,833	42	0.07
Torque(TQ), ft-lb	36,083	--	--

Table 3. Aero tare coefficient matrix

$$\text{Aero Load} = C0 + C1 * QPSF + C2 * QPSF^2$$

ALFS,U	Balance Parameter	C0	C1	C2
-15°	NF	0.000000E+00	-0.326101E+01	0.476469E-01
	AF	0.000000E+00	0.661349E+01	0.143181E-02
	SF	0.000000E+00	0.000000E+00	0.000000E+00
	PM	0.000000E+00	0.370070E+02	-0.296749E-01
	RM	0.000000E+00	-0.896100E+00	0.971002E-02
	TQ	0.106000E+03	0.194928E+01	-0.21002E-01
-10°	NF	0.000000E+00	-0.298026E+01	0.584926E-01
	AF	0.000000E+00	0.684417E+01	-0.163840E-01
	SF	0.000000E+00	-0.384309E+00	0.145089E-02
	PM	0.000000E+00	0.352023E+02	-0.256171E-01
	RM	0.000000E+00	-0.562534E+00	0.181376E-02
	TQ	0.106000E+03	0.274941E+01	-0.382801E-01
-5°	NF	0.000000E+00	0.000000E+00	0.000000E+00
	AF	0.000000E+00	0.000000E+00	0.000000E+00
	SF	0.000000E+00	-0.986075E+00	0.290571E-01
	PM	0.000000E+00	0.366249E+02	-0.117064E-01
	RM	0.000000E+00	-0.130419E+01	0.172272E-01
	TQ	0.106000E+03	0.181556E+01	-0.185694E-01
-2°	NF	0.000000E+00	-0.371327E+01	0.116512E+00
	AF	0.000000E+00	0.616055E+01	-0.157009E-01
	SF	0.000000E+00	-0.107114E+01	0.182306E-01
	PM	0.000000E+00	0.356245E+02	-0.376357E-01
	RM	0.000000E+00	-0.102194E+01	0.266390E-01
	TQ	0.106000E+03	-0.194027E+01	-0.119433E-01
0°	NF	0.000000E+00	0.314353E+01	-0.662631E-01
	AF	0.000000E+00	0.590607E+01	0.324471E-02
	SF	0.000000E+00	-0.857955E+00	0.107120E-02
	PM	0.000000E+00	0.353893E+02	-0.353695E-01
	RM	0.000000E+00	-0.135617E+01	0.175815E-01
	TQ	0.106000E+03	0.249418E+01	-0.338657E-01
+5°	NF	0.000000E+00	0.184863E+00	0.969723E-02
	AF	0.000000E+00	0.625300E+01	-0.188129E-01
	SF	0.000000E+00	-0.106543E+01	0.135065E-01
	PM	0.000000E+00	0.354519E+02	-0.399007E-01
	RM	0.000000E+00	-0.236734E+01	0.514371E-01
	TQ	0.106000E+03	0.166225E+01	-0.607216E-03

Table 3. Aero tare coefficient matrix (continued)

$$\text{Aero Load} = C0 + C1 * \text{QPSF} + C2 * \text{QPSF}^2$$

ALFS,U	Balance Parameter	C0	C1	C2
+10°	NF	0.000000E+00	0.222560E+01	-0.237747E-02
	AF	0.000000E+00	0.535671E+01	0.777188E-02
	SF	0.000000E+00	-0.114855E+01	0.166964E-01
	PM	0.000000E+00	0.344327E+02	-0.295324E-01
	RM	0.000000E+00	-0.139549E+01	0.491692E-02
	TQ	0.106000E+03	0.279907E+01	-0.351700E-01

Table 4. Fixed system measurements

Measurement	Location	Units	Sign Convention
Lift (NF)	Rotor Balance	lb	up
Side (SF)	Rotor Balance	lb	right
Drag (AF)	Rotor Balance	lb	aft
Pitch (PM)	Rotor Balance	ft-lb	nose up
Roll (RM)	Rotor Balance	ft-lb	right wing down

Table 5. Rotating system measurements

Measurement	Blade Number	Location (r/R)	Units	Sign Convention
Flap Bending	1	0.127	ft-lb	tip up
Flap Bending	1	0.200	ft-lb	tip up
Flap Bending	1	0.300	ft-lb	tip up
Flap Bending	1	0.679	ft-lb	tip up
Flap Bending	1	0.920	ft-lb	tip up
Chord Bending	1	0.127	ft-lb	tip aft
Chord Bending	1	0.200	ft-lb	tip aft
Chord Bending	1	0.300	ft-lb	tip aft
Chord Bending	1	0.454	ft-lb	tip aft
Pitch Link	1	Pitch Horn	lb	tension
Flap Angle	1	Pitch Horn	deg	flap up
Rotor Shaft Torque (TQ)	-	center of balance	ft-lb	counter clockwise

Table 6. Hover test matrix

Shaft Angles, $\alpha_s$	-15°, -10°, -5°, 0°, 5°, 10°, 15°*
$C_T/\sigma$	0.02 - 0.12
MTIP	0.605
YAW	0°, 90°*

\*Note: For YAW = 90°, hover data taken only at  $\alpha_s = +15^\circ$

Table 7. Thrust sweep test matrix

$C_T/\sigma = 0.03-0.125$   
MTIP: 0.605 (675 fps)

		$\alpha_s$					
VKTS	$\mu$	10°	5°	0°	-2°	-10°	-15°
20	0.050				X		
32	0.080			X			
40	0.100	X	X		X	X	X
50	0.125	X	X				
60	0.150	X	X		X	X	X
80	0.200	X	X		X	X	
100	0.250	X	X		X	X	X

Table 8. Speed sweep test matrix

VKTS = 0-100 kt  
MTIP: 0.605 (675 fps)

		Thrust, lb		
		8,000 ( $C_T/\sigma = .065$ )	9,850 (.080)	12,320 (.100)
$\alpha_s$	10°		X	X
	5°	X	X	X
	0°		X	
	-2°	X	X	X
	-5°	X	X	
	-10°	X	X	X

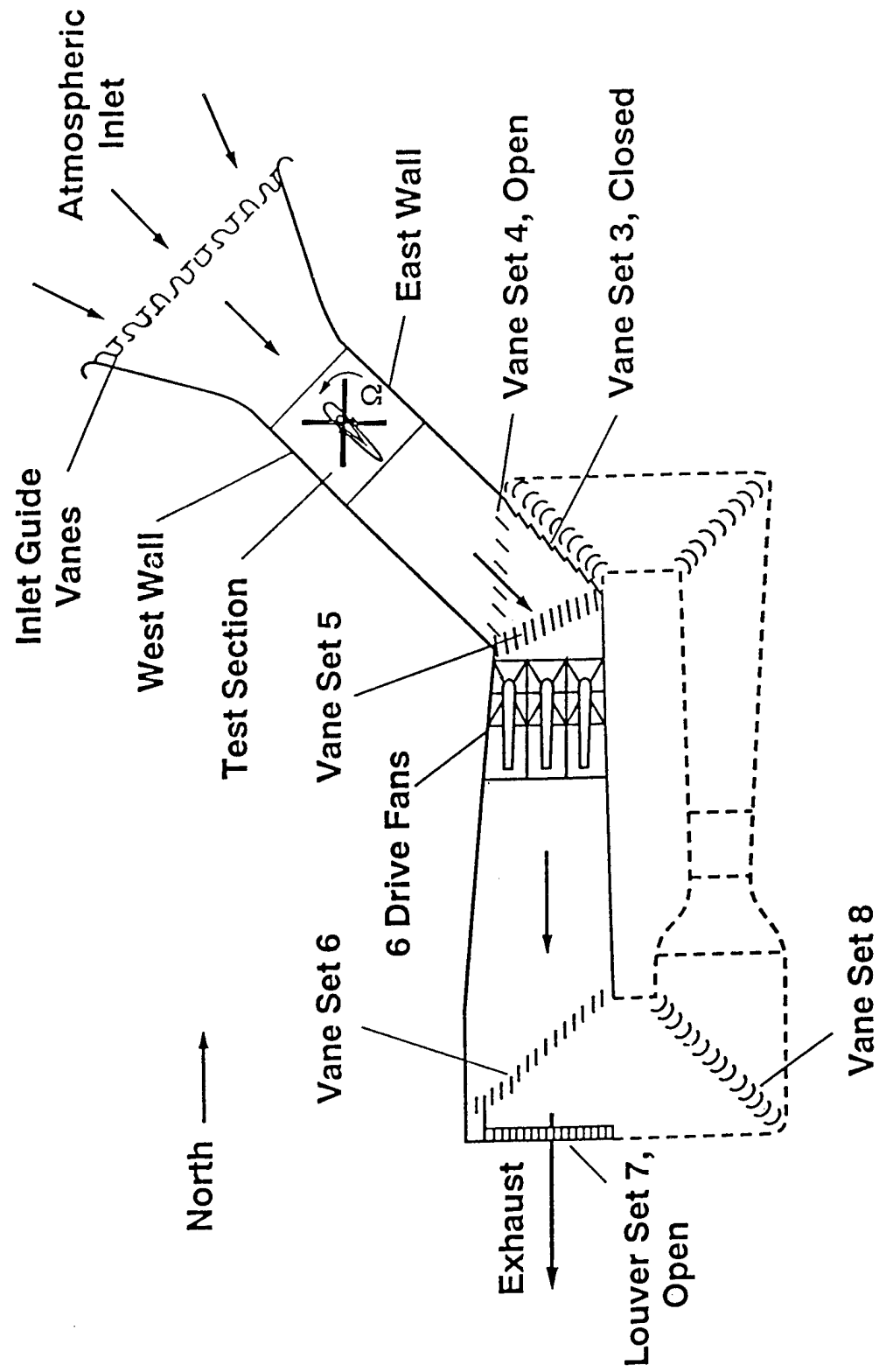


Figure 1. 80- by 120-Foot Wind Tunnel Circuit.



*Figure 2. S-76 Rotor System installed on Rotor Test Apparatus in the Ames 80- by 120-Foot Wind Tunnel Test Section.*

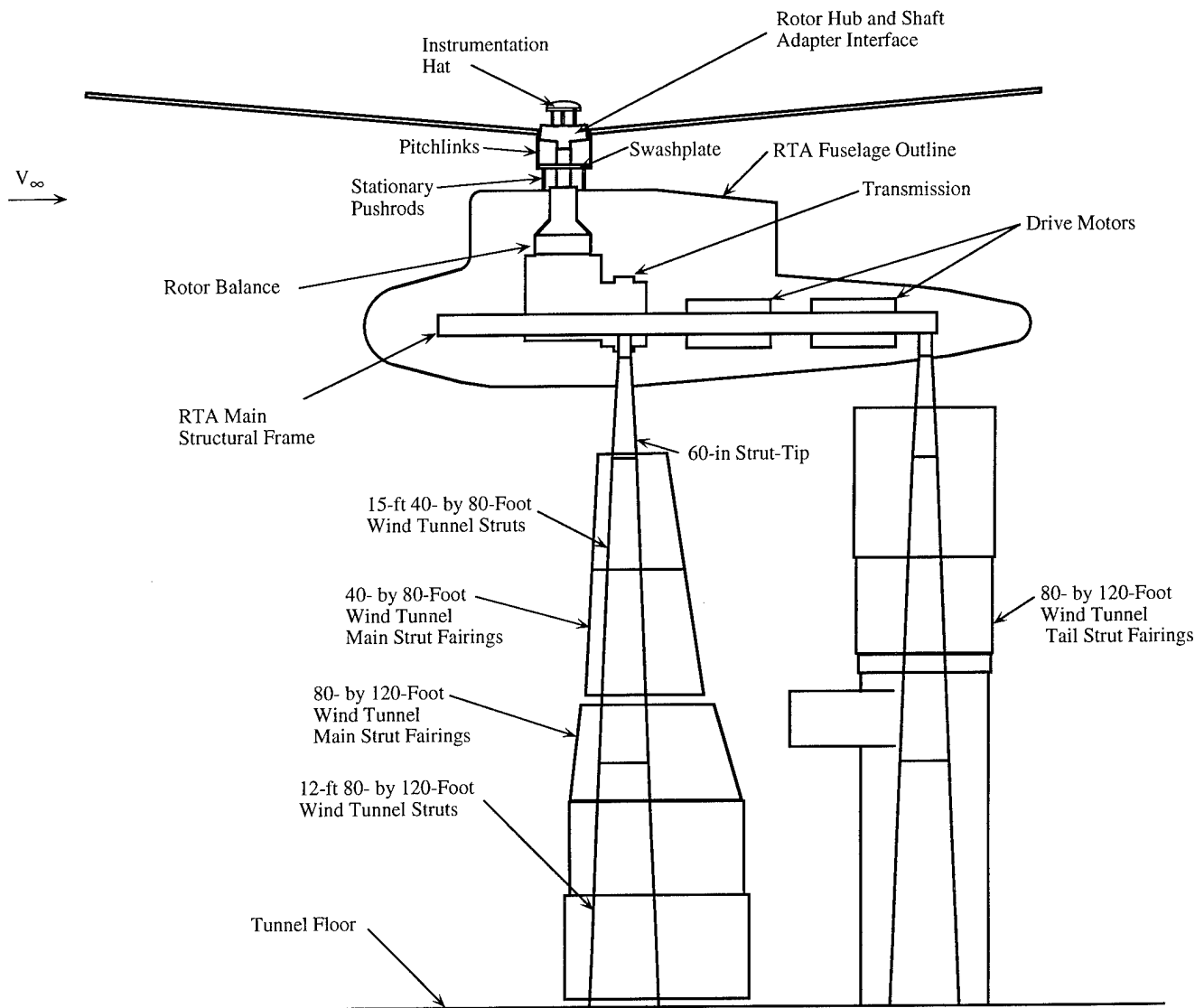


Figure 3a. Schematic of RTA/S-76 rotor test set-up in the 80- by 120-Foot Wind Tunnel.

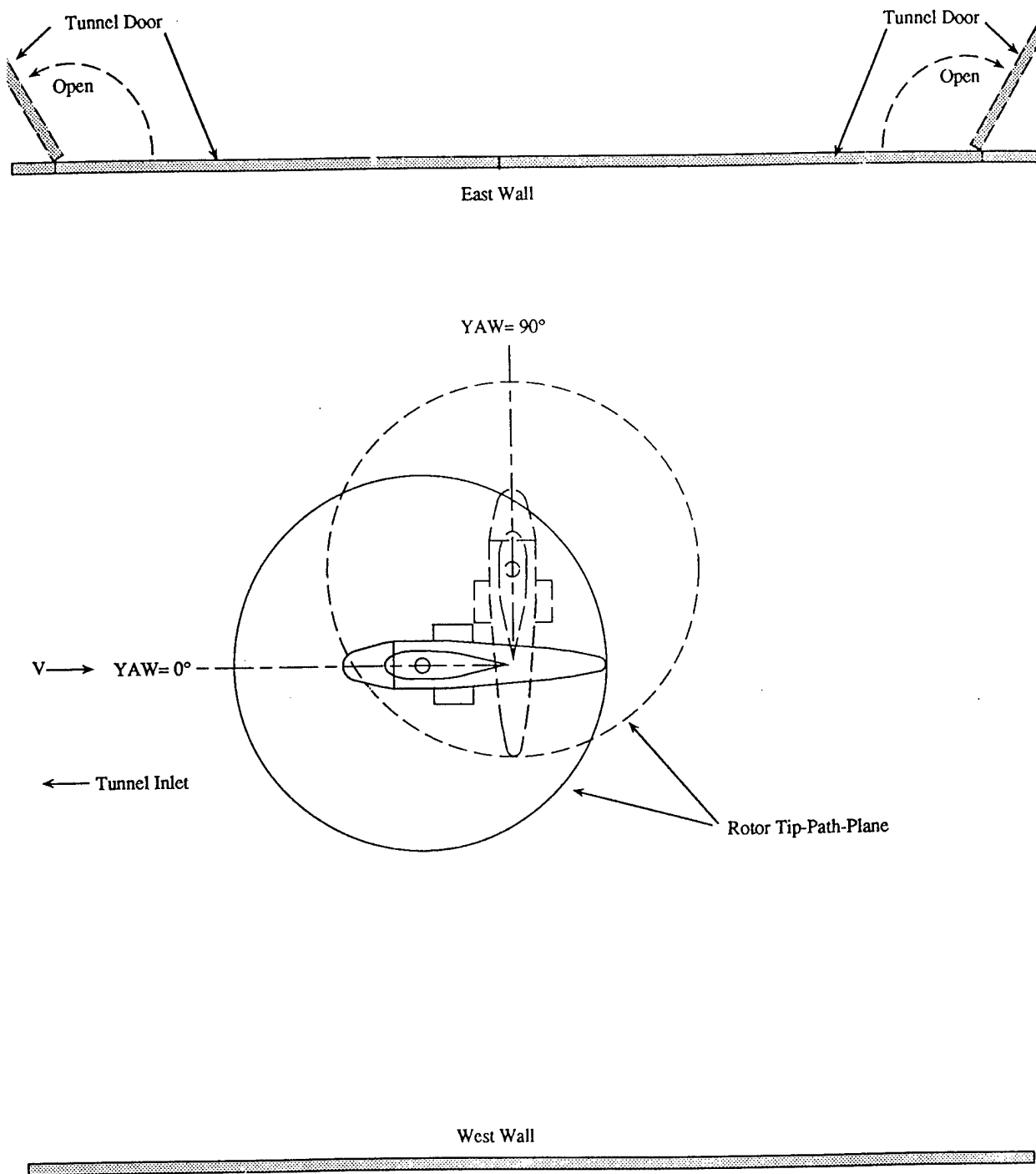


Figure 3(b). Plan view of model in the 80- by 120-Foot Wind Tunnel test section YAW = 0 deg and 90 deg.



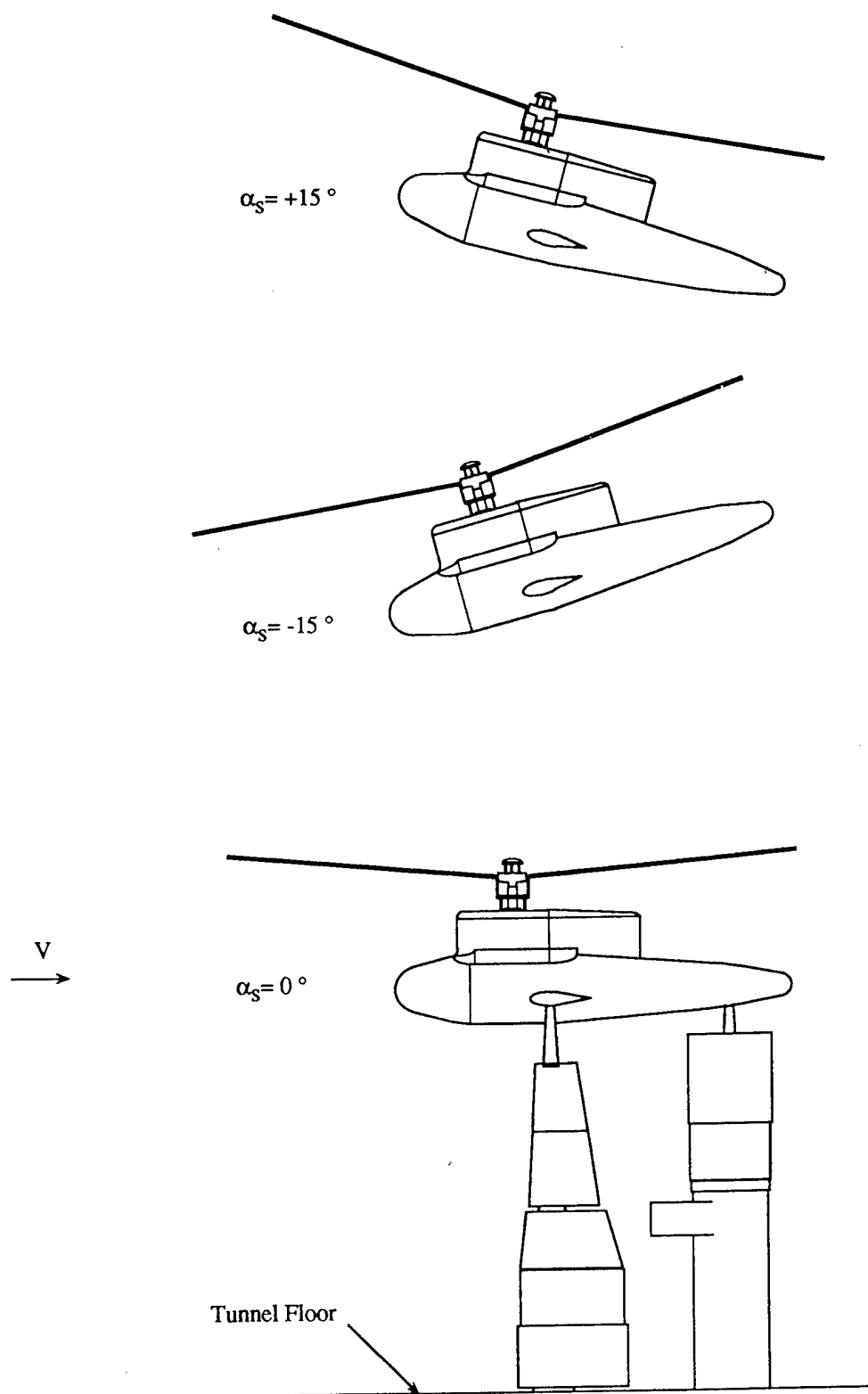


Figure 3(c). Sideview of model in tunnel test section  $\alpha_s = 0$  deg, -15 deg and 15 deg.

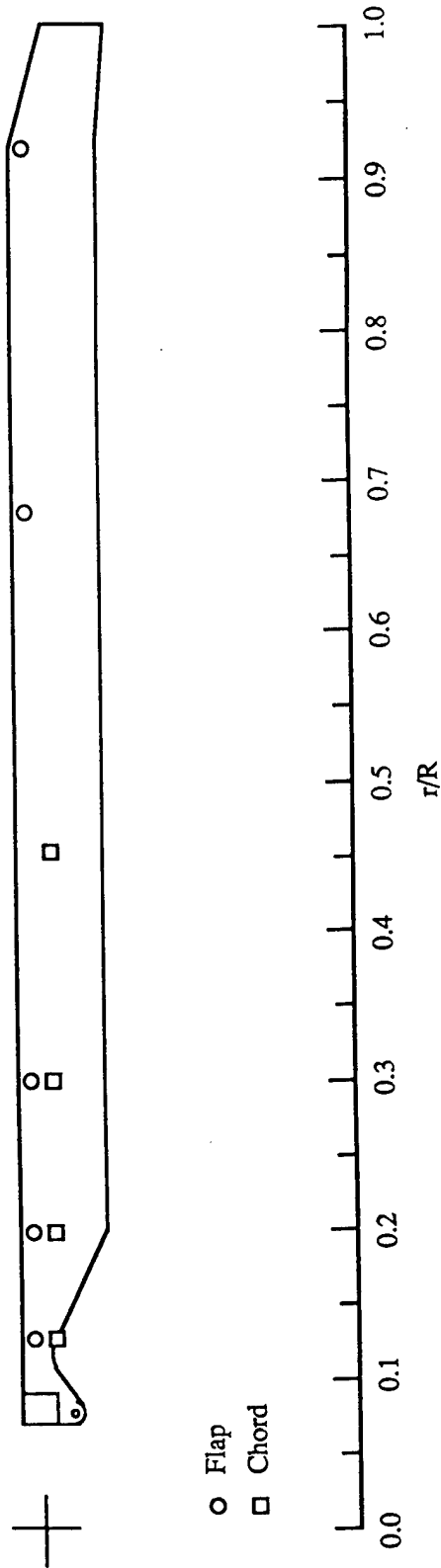


Figure 4. Radial locations of blade flap and chord instrumentation for the wind tunnel test program.

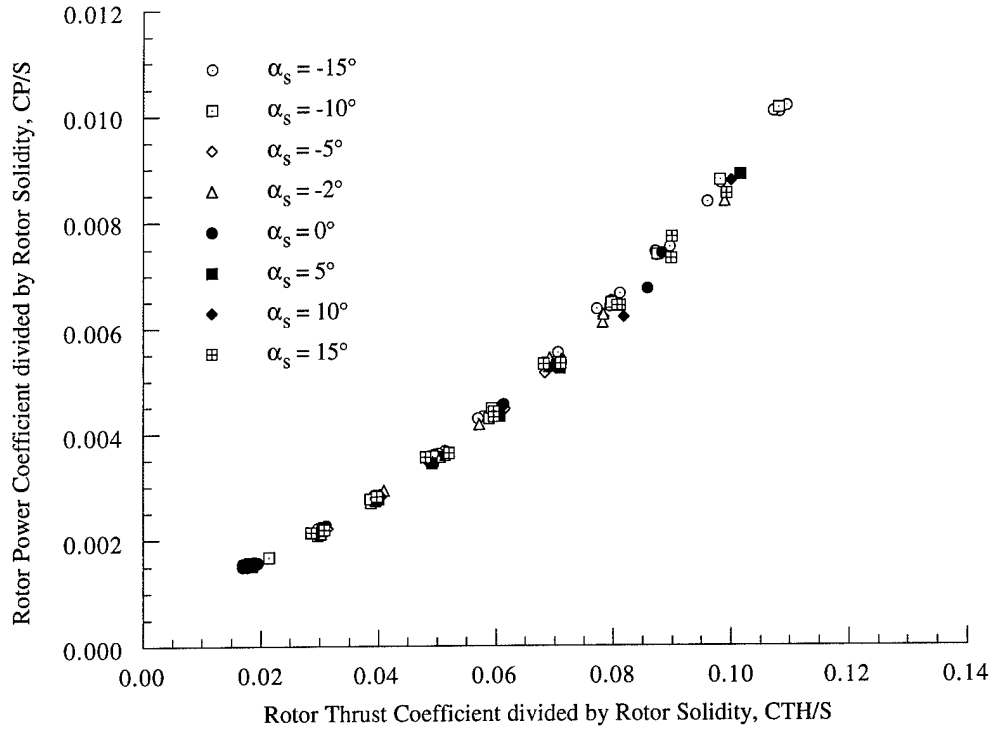


Figure 5(a). Rotor power coefficient as a function of rotor thrust coefficient, YAW = 0 deg, hover.

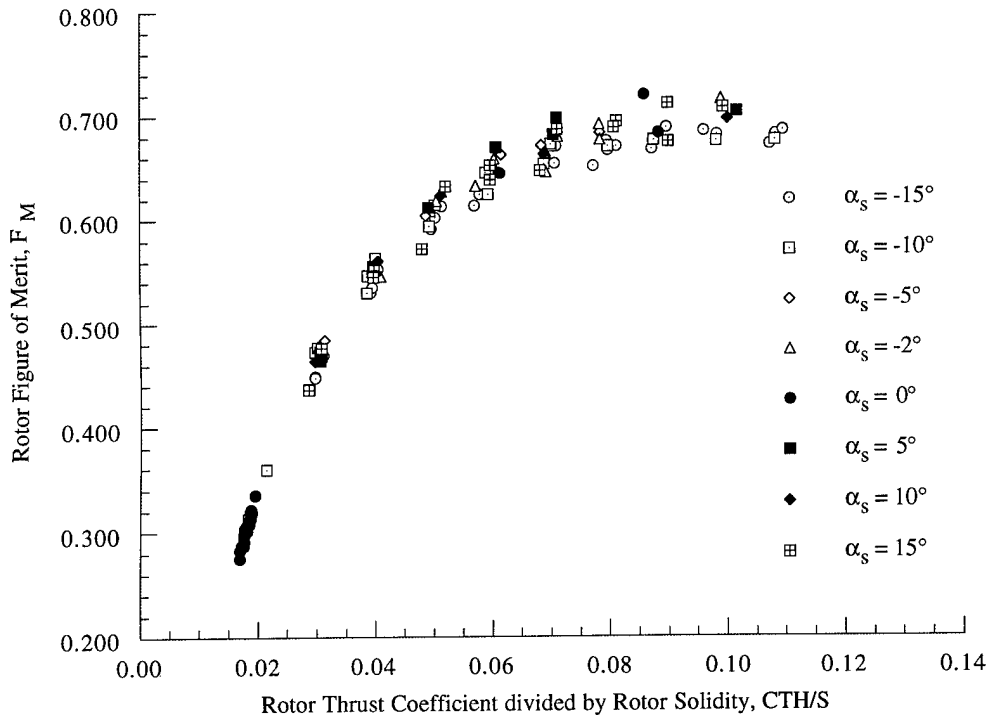


Figure 5(b). Rotor figure of merit as a function of rotor thrust coefficient, YAW = 0 deg, hover.

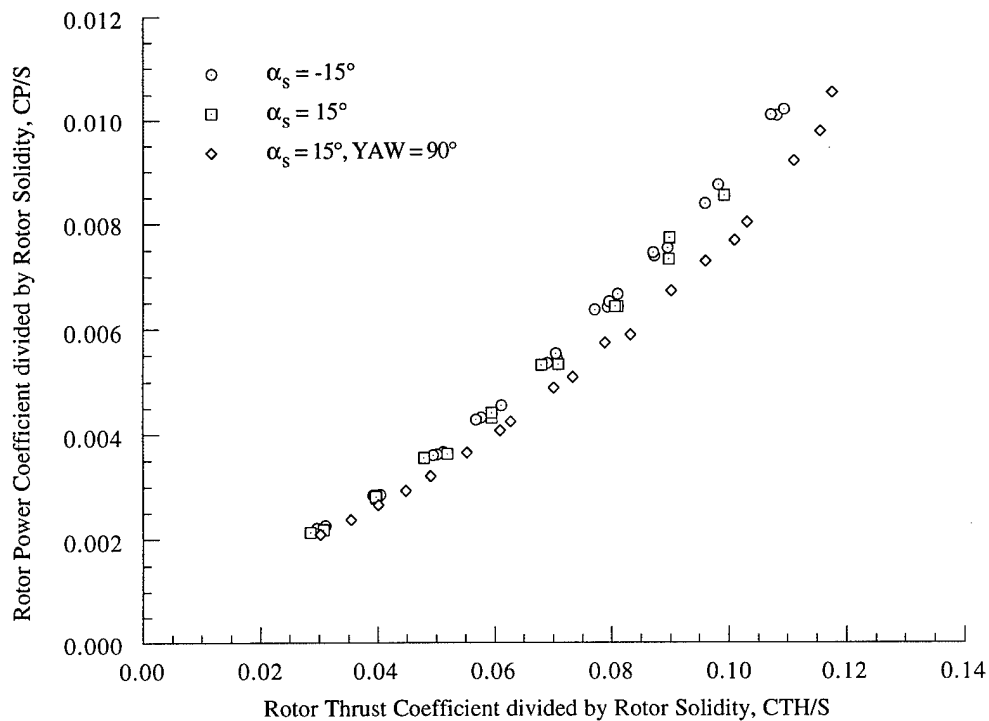


Figure 6(a). Rotor power coefficient as a function of rotor thrust coefficient at two different yaw positions, YAW = 0 deg, 90 deg, hover.

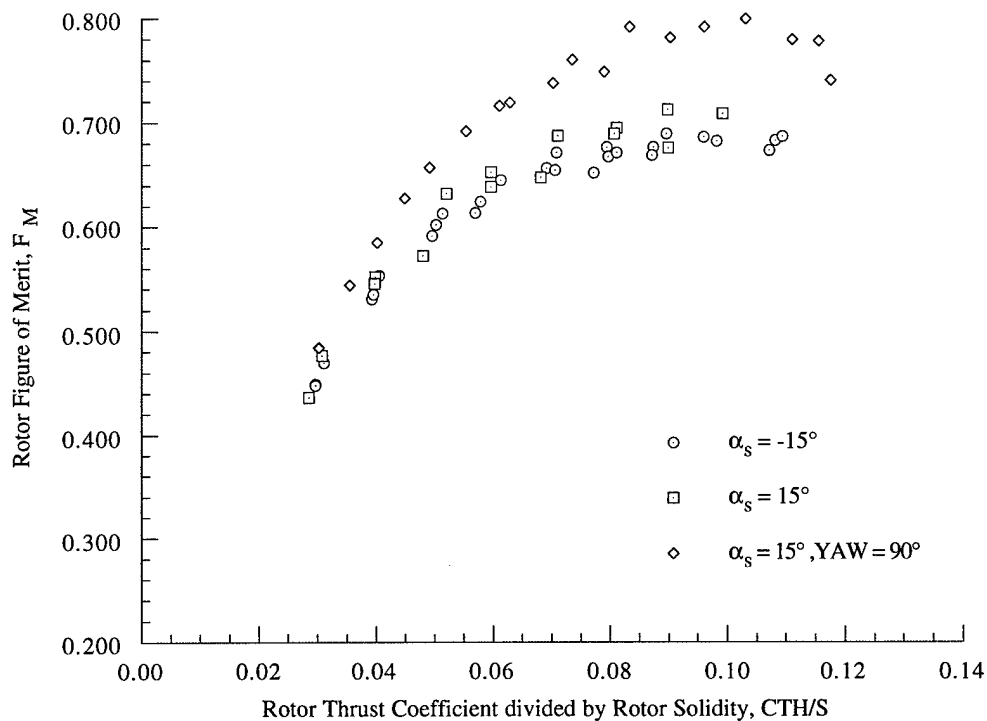


Figure 6(b). Rotor figure of merit as a function of rotor thrust coefficient at two different yaw positions, YAW = 0 deg, 90 deg, hover.

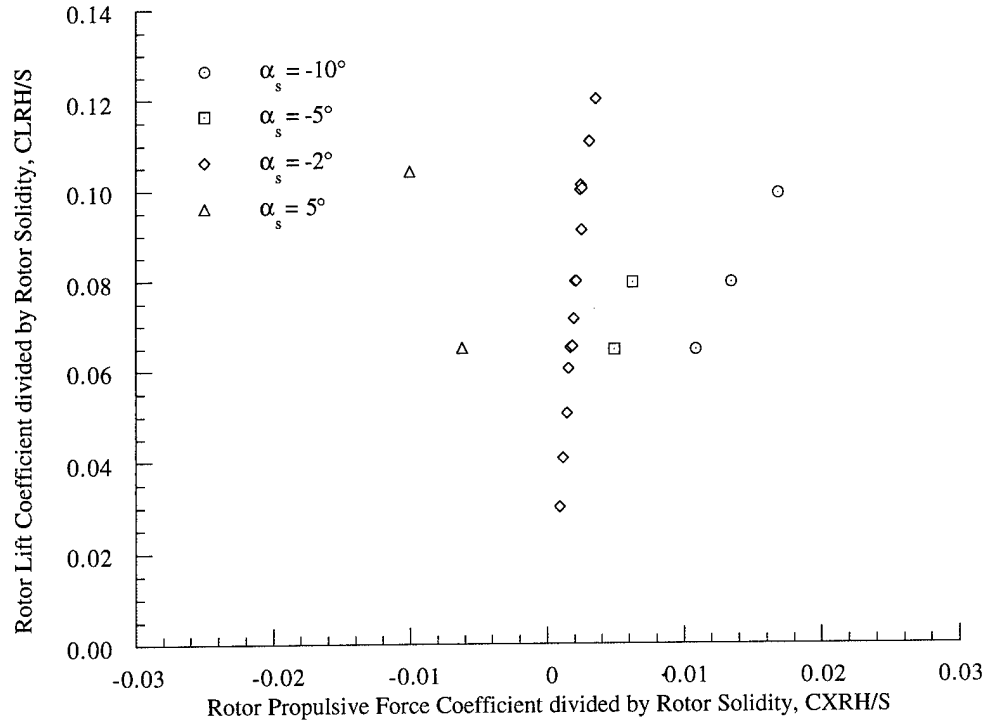


Figure 7(a). Rotor lift coefficient as a function of rotor propulsive force coefficient, 20 knots ( $\mu = 0.05$ ).

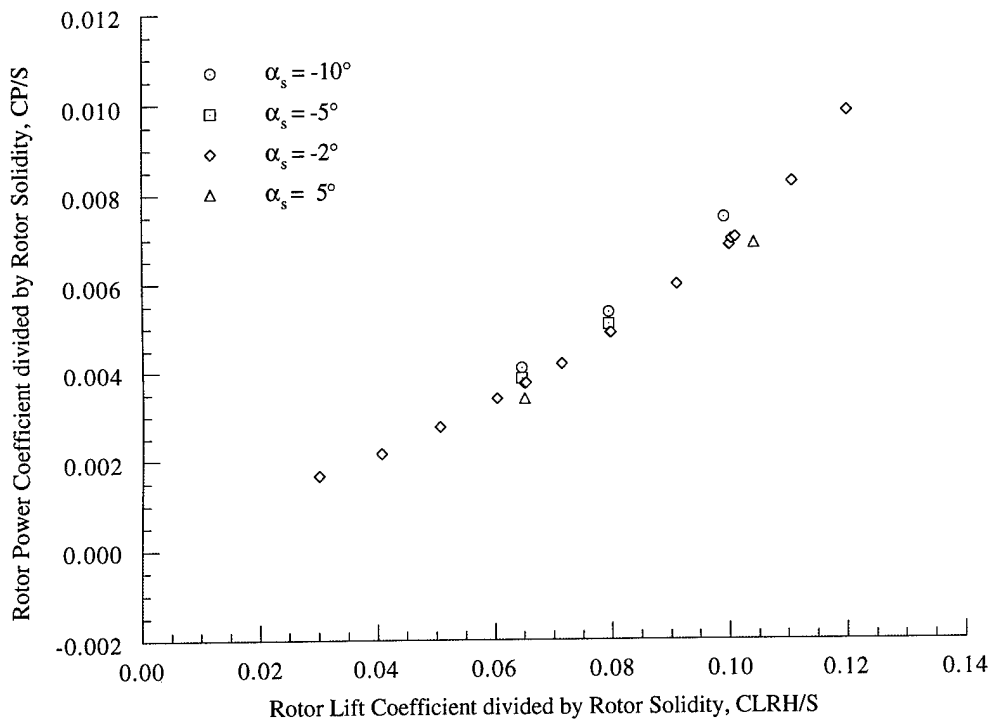


Figure 7(b). Rotor power coefficient as a function of rotor lift coefficient, 20 knots ( $\mu = 0.05$ ).

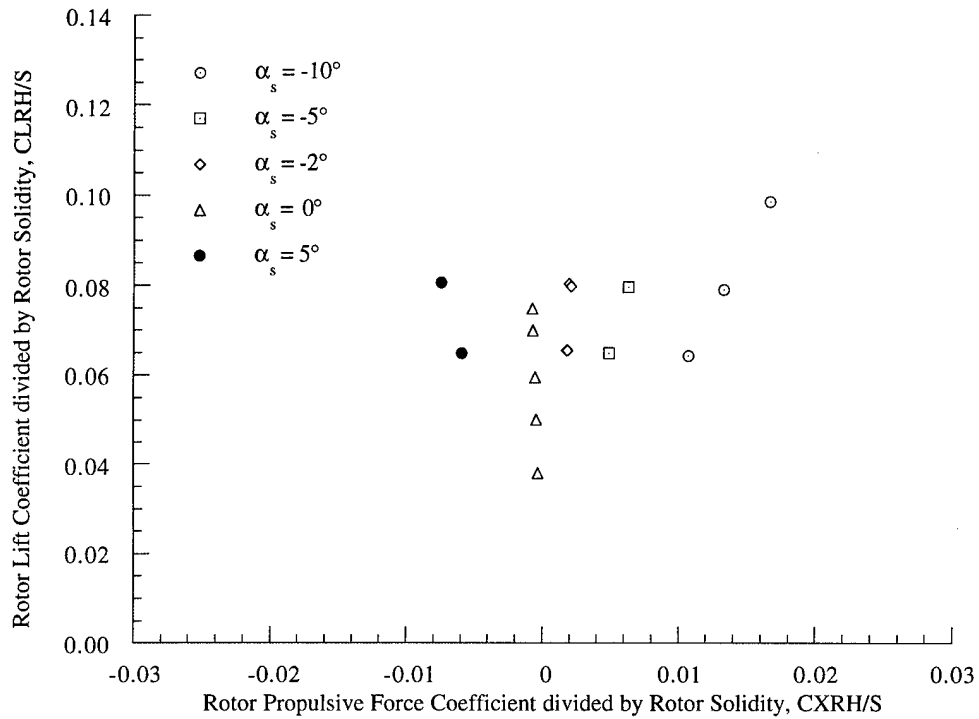


Figure 8(a). Rotor lift coefficient as a function of rotor propulsive force coefficient, 32 knots ( $\mu = 0.08$ ).

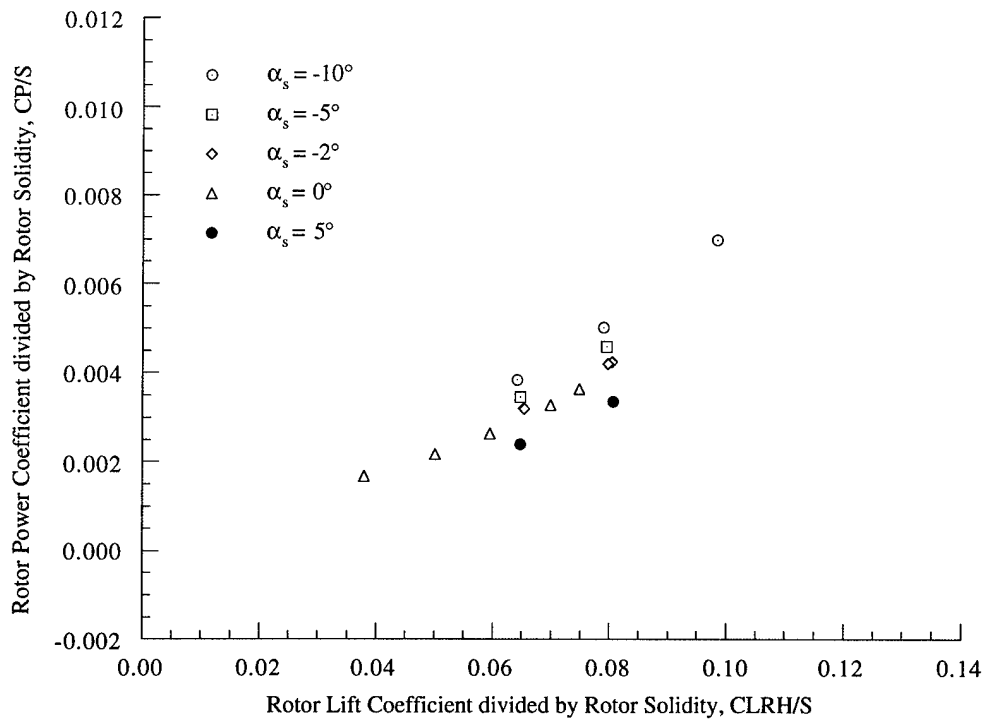


Figure 8(b). Rotor power coefficient as a function of rotor lift coefficient, 32 knots ( $\mu = 0.08$ ).

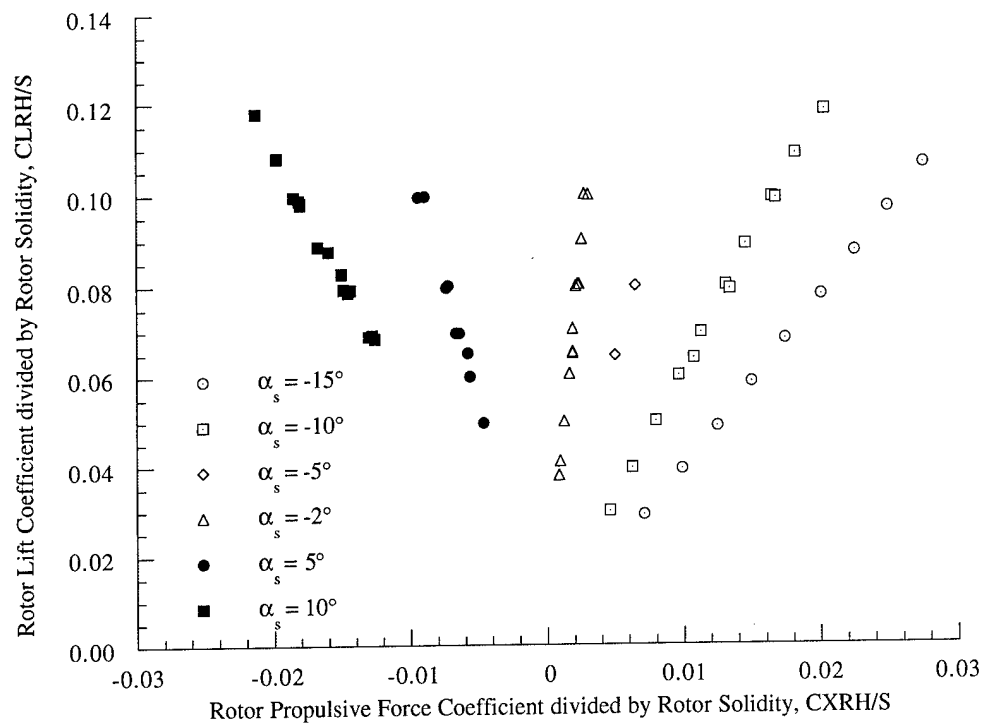


Figure 9(a). Rotor lift coefficient as a function of rotor propulsive force coefficient, 40 knots ( $\mu = 0.10$ ).

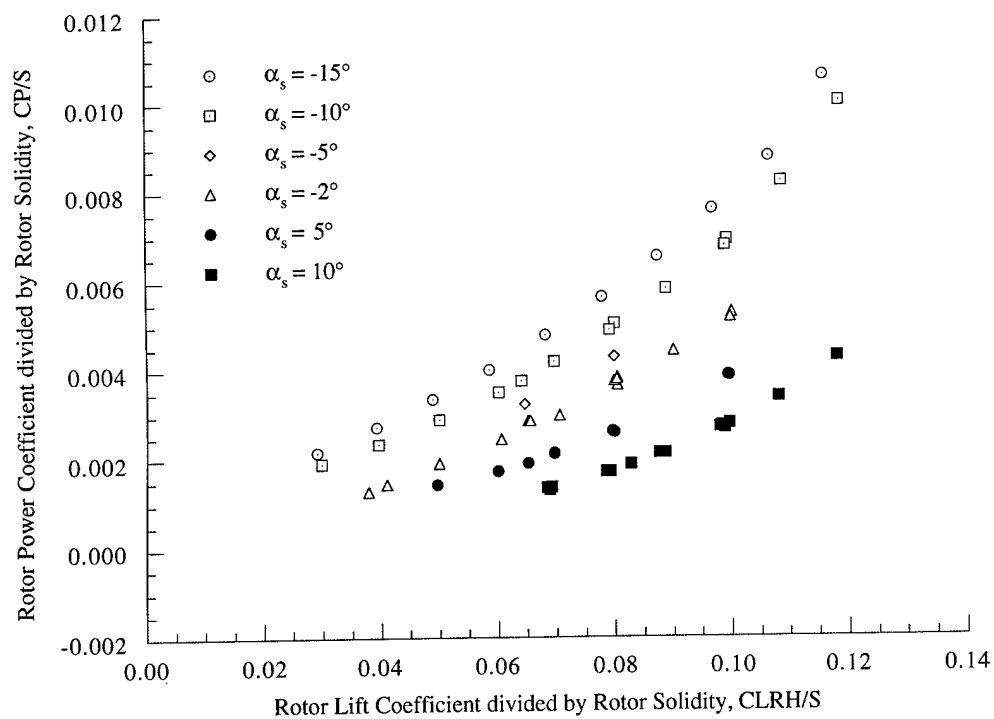


Figure 9(b). Rotor power coefficient as a function of rotor lift coefficient, 40 knots ( $\mu = 0.10$ ).

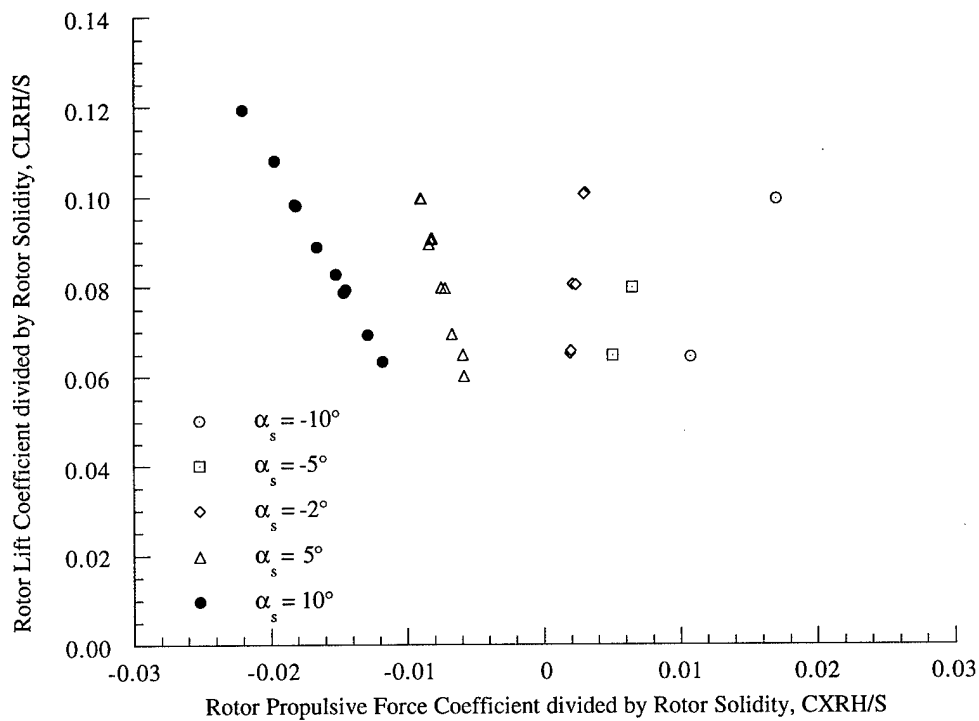


Figure 10(a). Rotor lift coefficient as a function of rotor propulsive force coefficient, 50 knots ( $\mu = 0.125$ ).

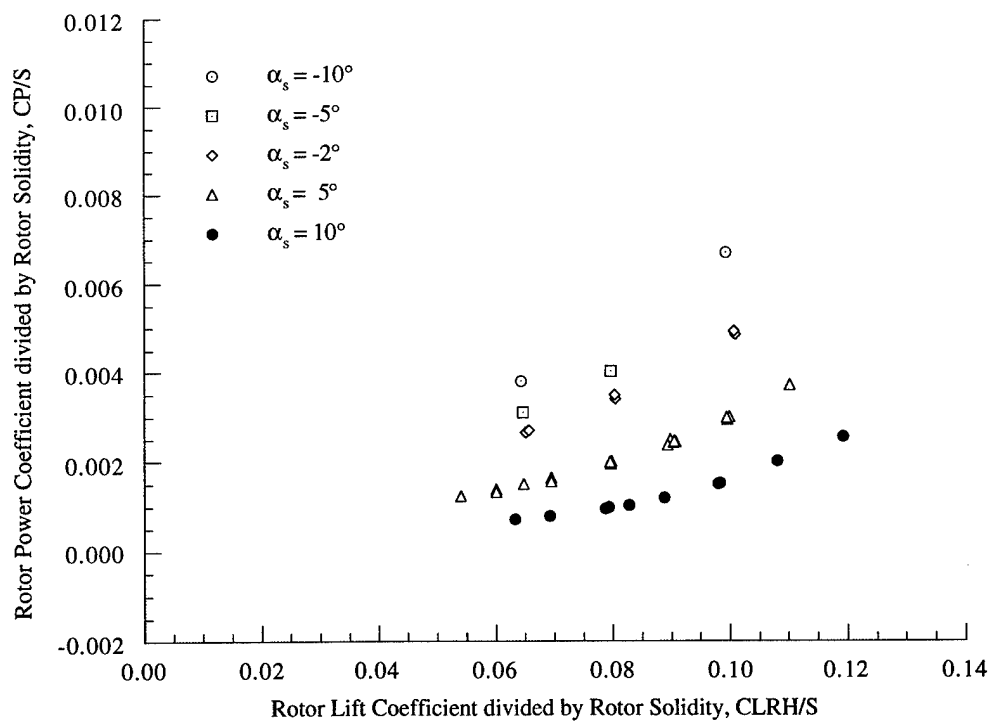


Figure 10(b). Rotor power coefficient as a function of rotor lift coefficient, 50 knots ( $\mu = 0.125$ ).



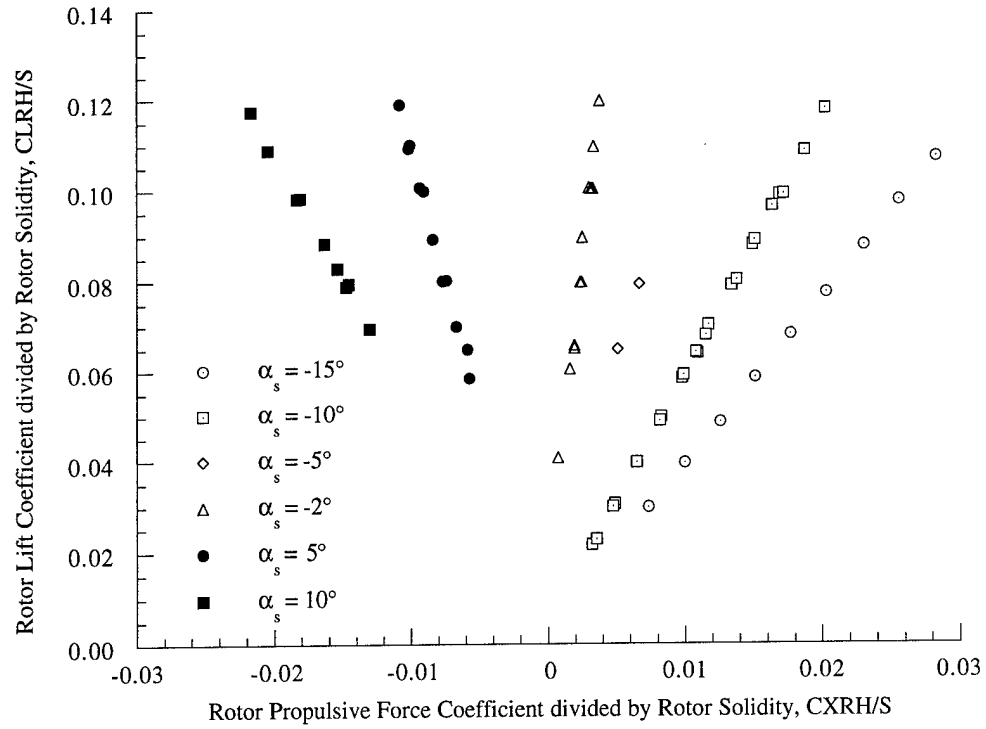


Figure 11(a). Rotor lift coefficient as a function of rotor propulsive force coefficient, 60 knots ( $\mu = 0.15$ ).

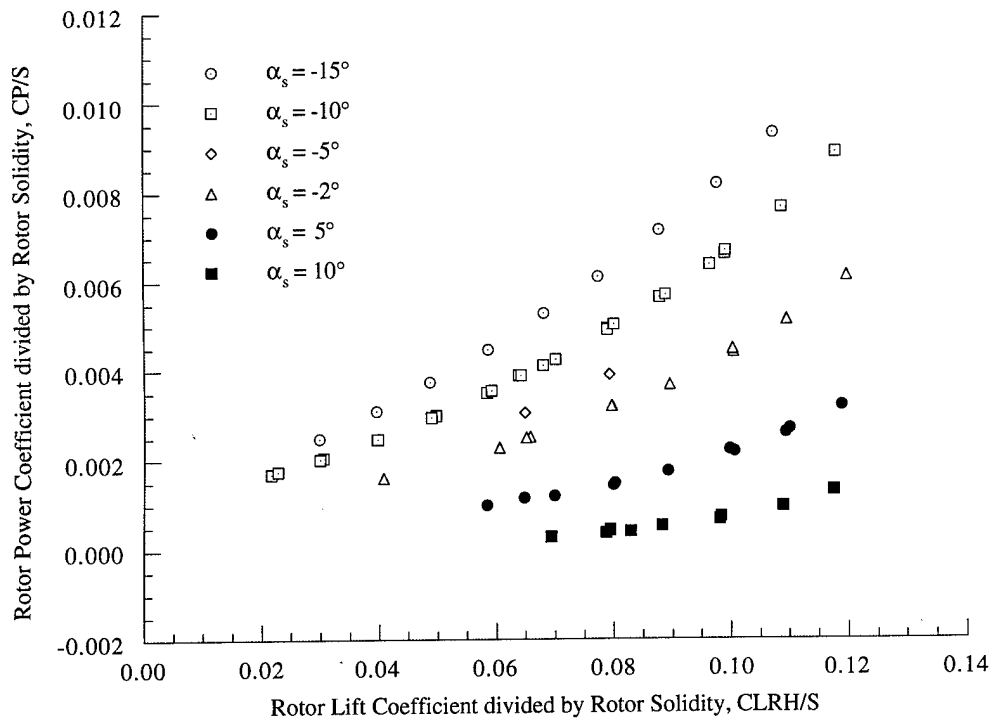


Figure 11(b). Rotor power coefficient as a function of rotor lift coefficient, 60 knots ( $\mu = 0.15$ ).

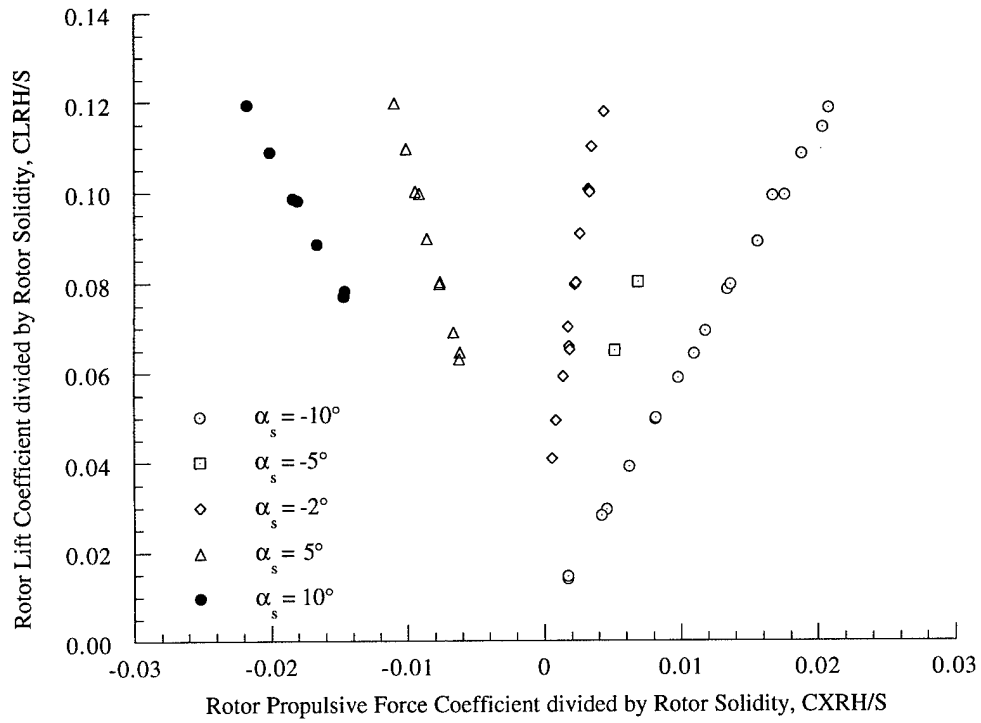


Figure 12(a). Rotor lift coefficient as a function of rotor propulsive force coefficient, 80 knots ( $\mu = 0.20$ ).

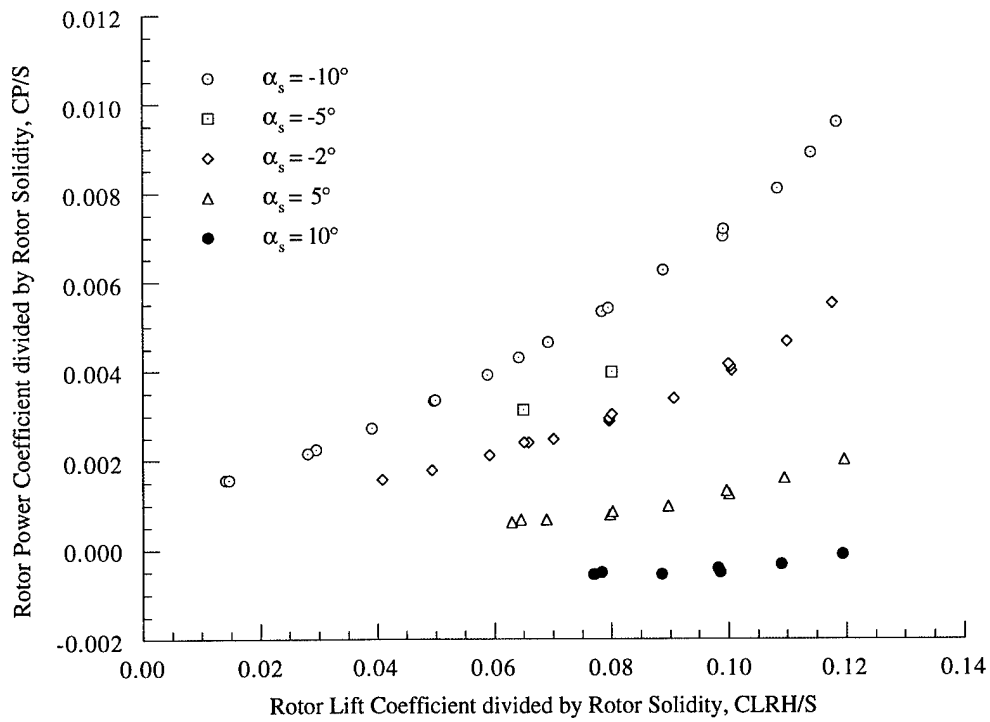


Figure 12(b). Rotor power coefficient as a function of rotor lift coefficient, 80 knots ( $\mu = 0.20$ ).

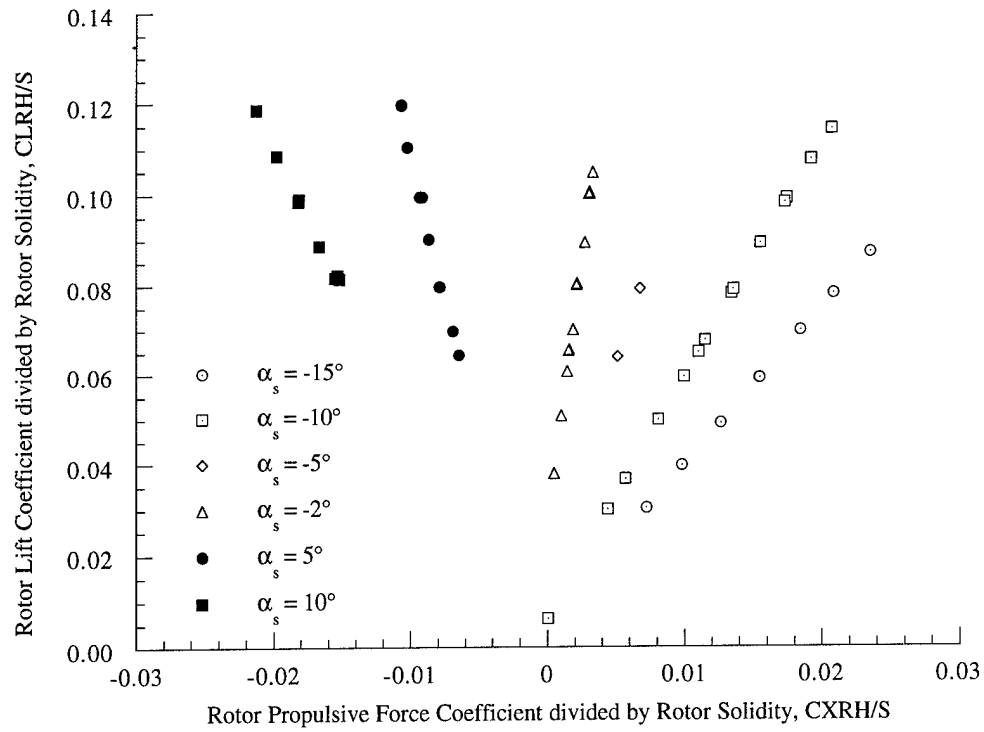


Figure 13(a). Rotor lift coefficient as a function of rotor propulsive force coefficient, 100 knots ( $\mu = 0.25$ ).

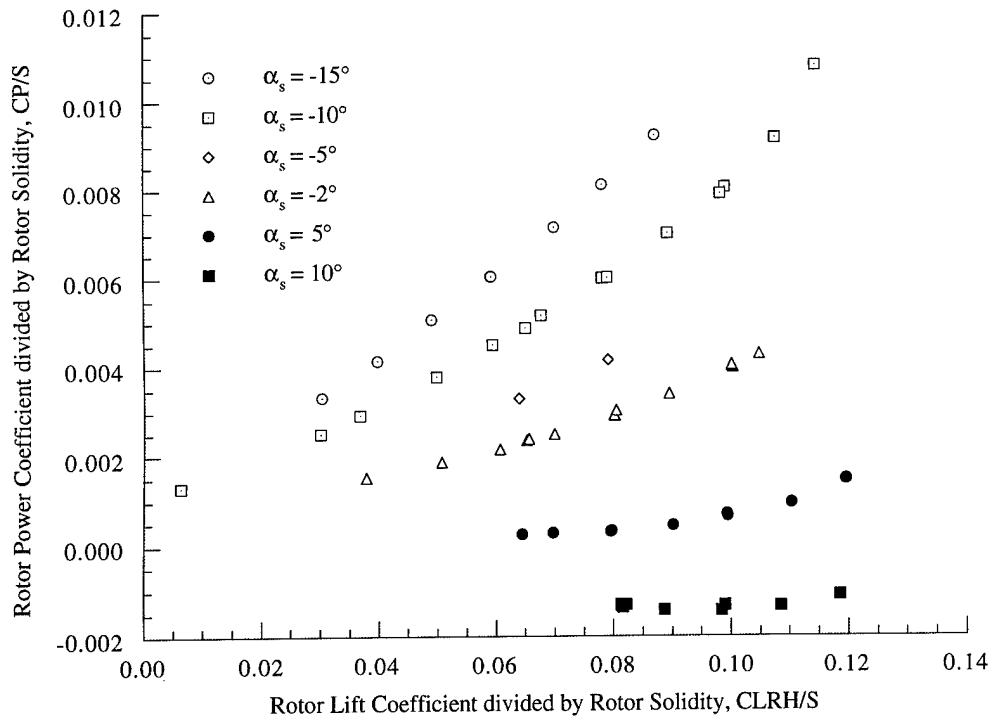


Figure 13(b). Rotor power coefficient as a function of rotor lift coefficient, 100 knots ( $\mu = 0.25$ ).

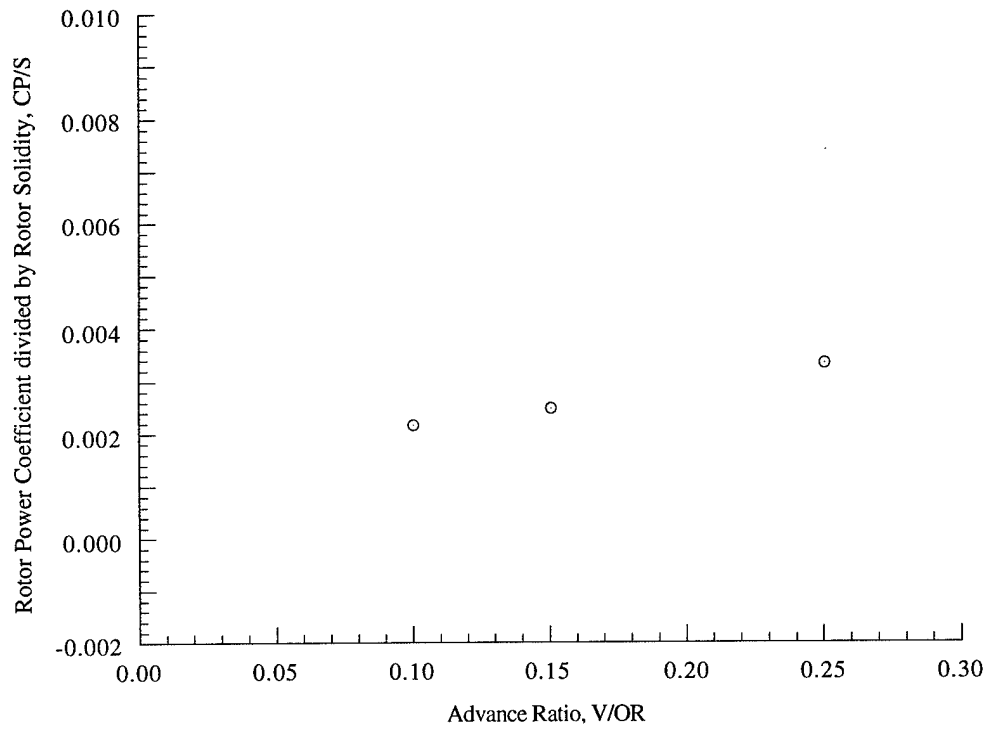


Figure 14(a). Rotor power coefficient as a function of advance ratio,  $\alpha_s = -15$  deg,  $C_T/\sigma = 0.030$ .

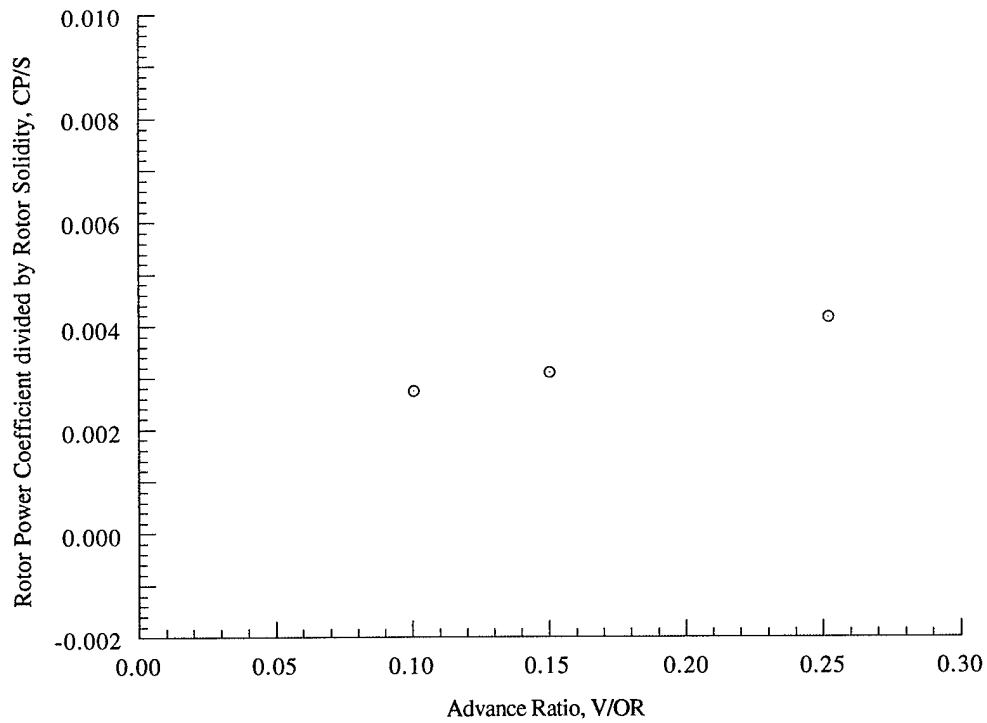


Figure 14(b). Rotor power coefficient as a function of advance ratio,  $\alpha_s = -15$  deg,  $C_T/\sigma = 0.040$ .

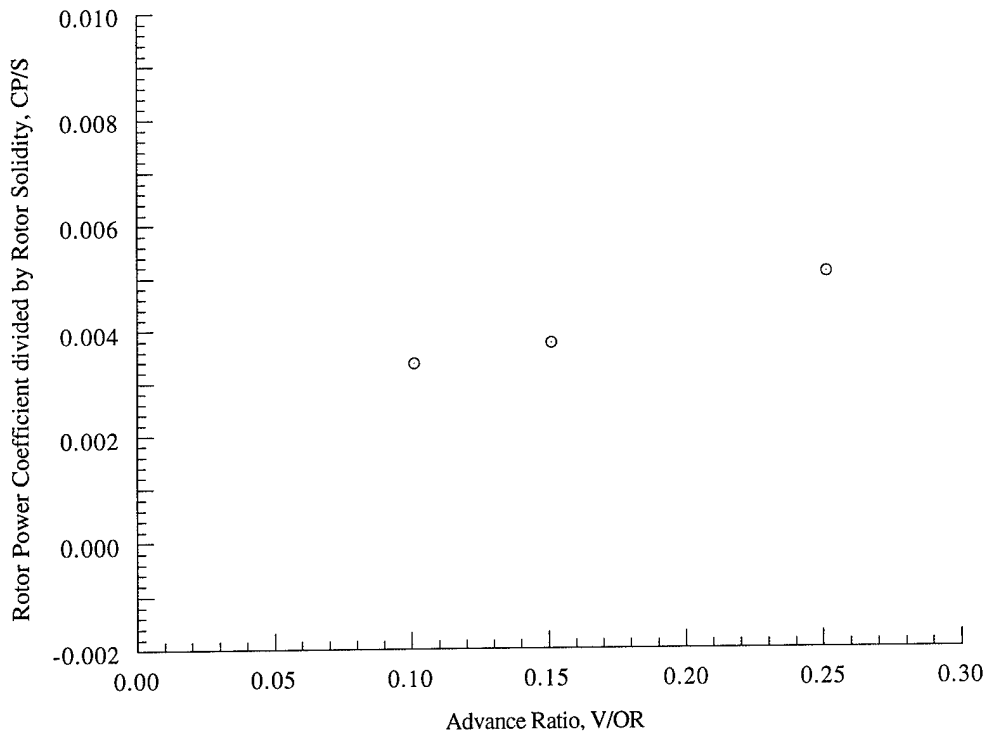


Figure 14(c). Rotor power coefficient as a function of advance ratio,  $\alpha_S = -15$  deg,  $C_T/\sigma = 0.050$ .

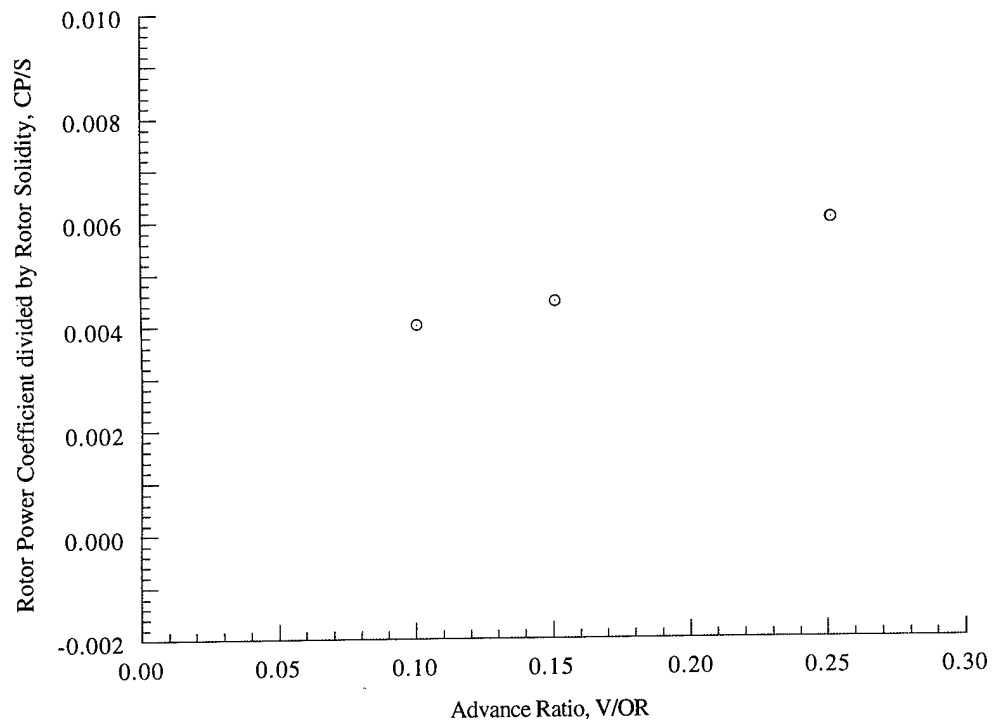


Figure 14(d). Rotor power coefficient as a function of advance ratio,  $\alpha_S = -15$  deg,  $C_T/\sigma = 0.060$ .

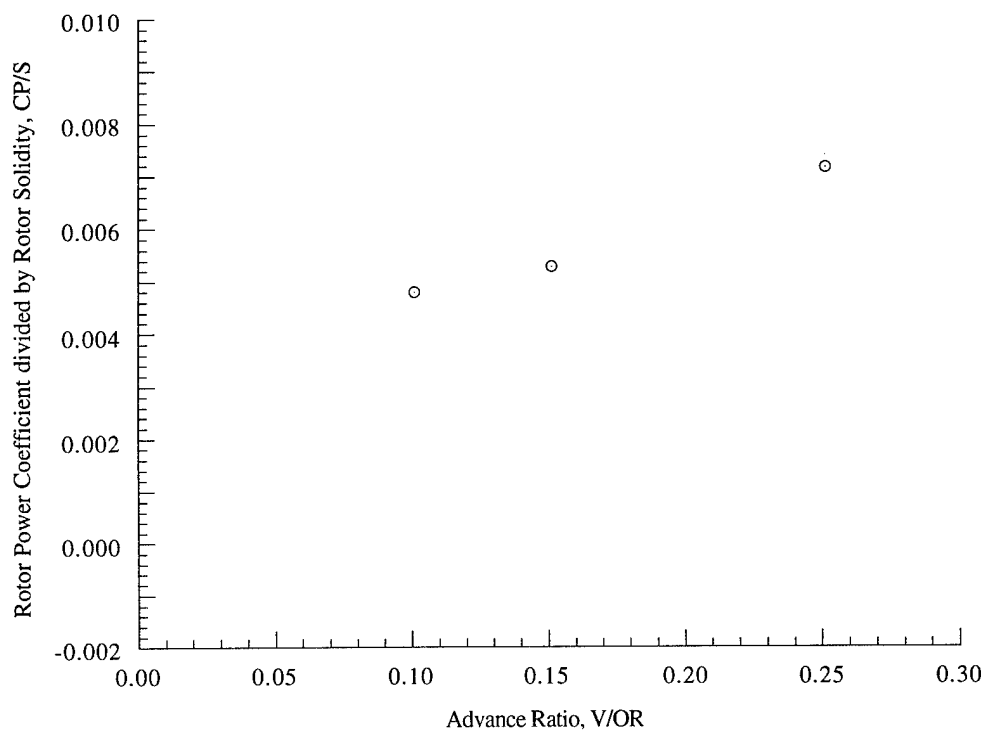


Figure 14(e). Rotor power coefficient as a function of advance ratio,  $\alpha_S = -15$  deg,  $CT/\sigma = 0.070$ .

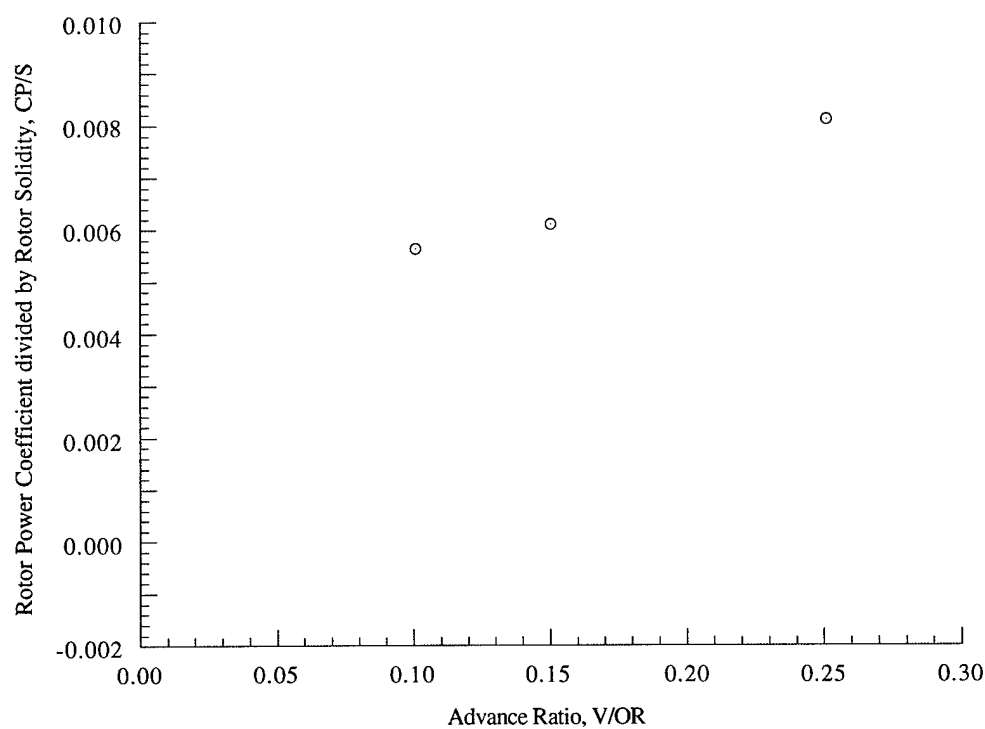


Figure 14(f). Rotor power coefficient as a function of advance ratio,  $\alpha_S = -15$  deg,  $CT/\sigma = 0.080$ .

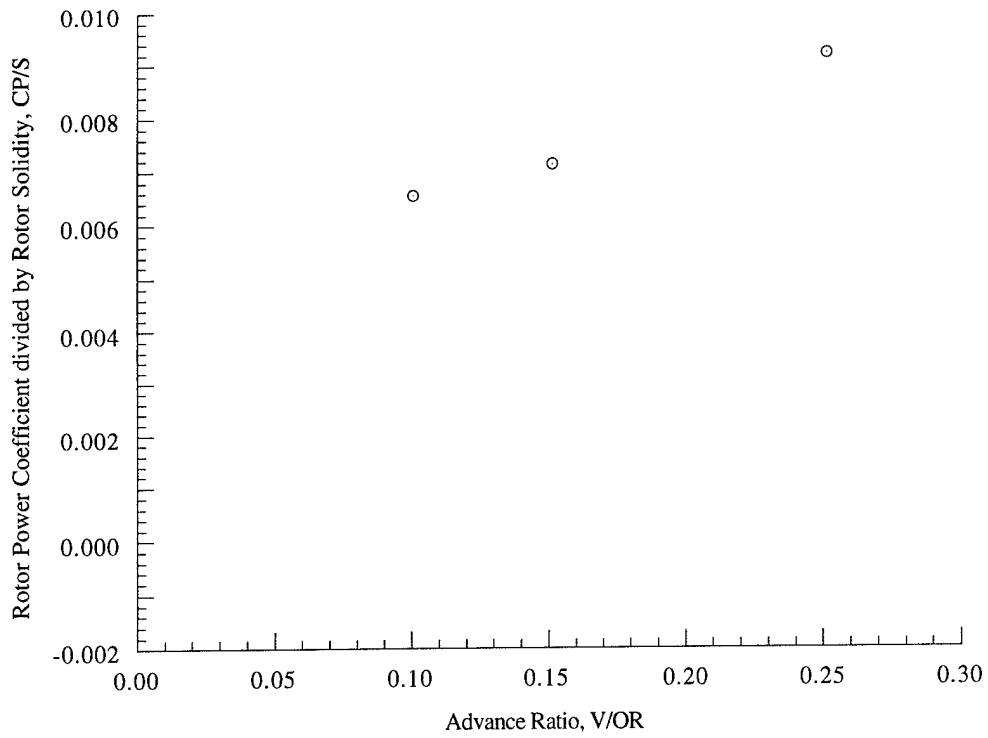


Figure 14(g). Rotor power coefficient as a function of advance ratio,  $\alpha_S = -15$  deg,  $C_T/\sigma = 0.090$ .

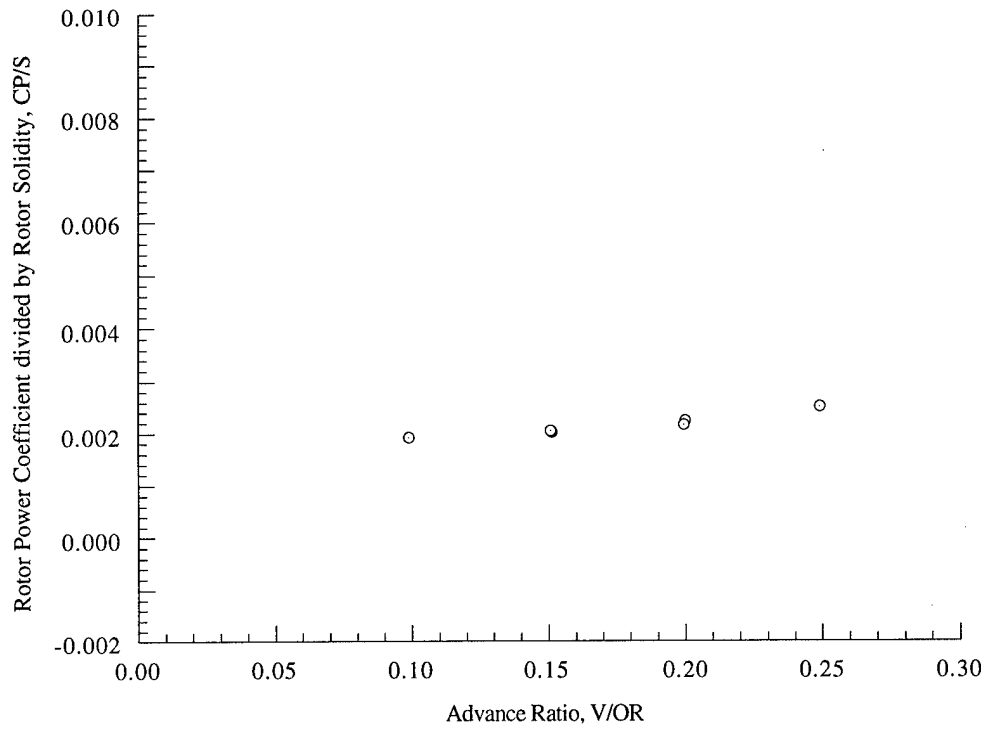


Figure 15(a). Rotor power coefficient as a function of advance ratio,  $\alpha_S = -10$  deg,  $C_T/\sigma = 0.030$ .

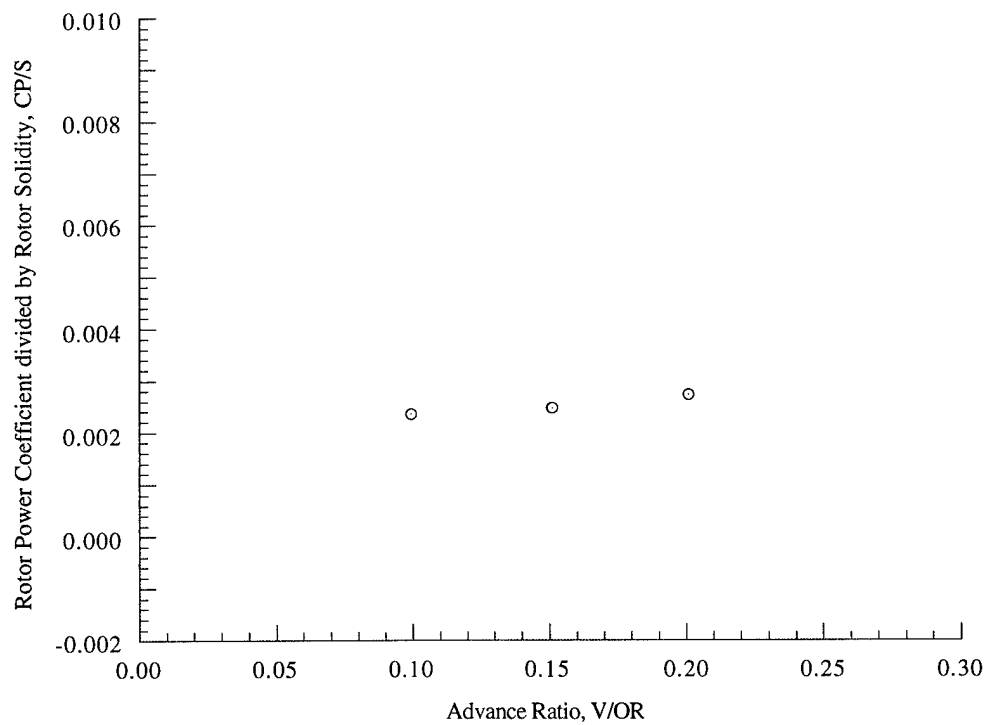


Figure 15(b). Rotor power coefficient as a function of advance ratio,  $\alpha_S = -10$  deg,  $C_T/\sigma = 0.040$ .



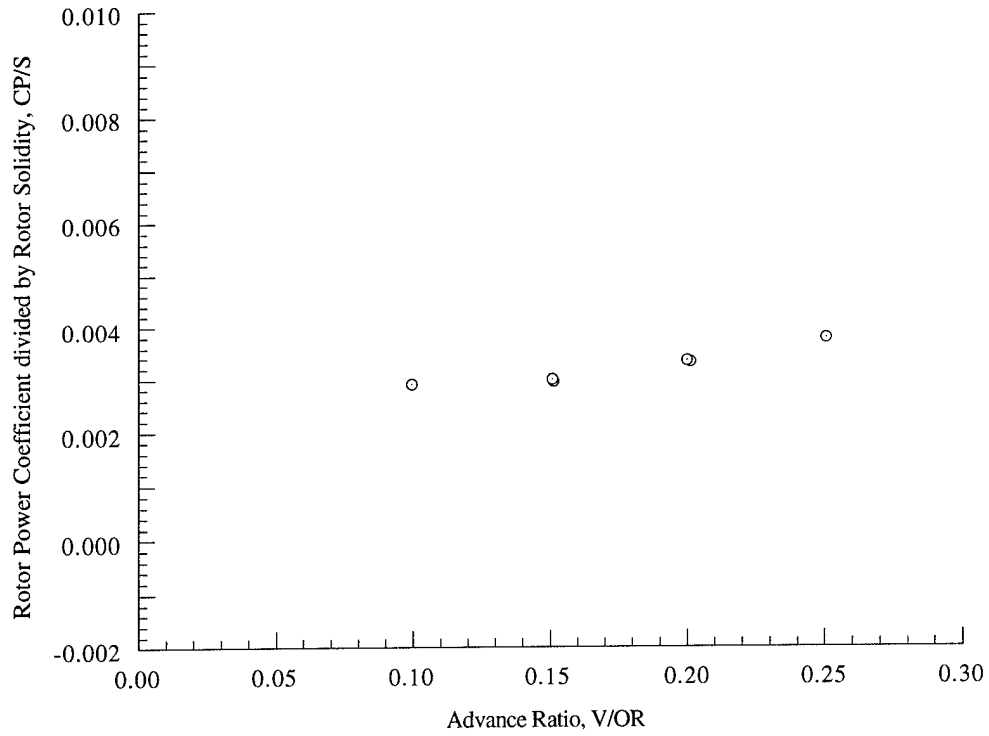


Figure 15(c). Rotor power coefficient as a function of advance ratio,  $\alpha_S = -10$  deg,  $C_T/\sigma = 0.050$ .

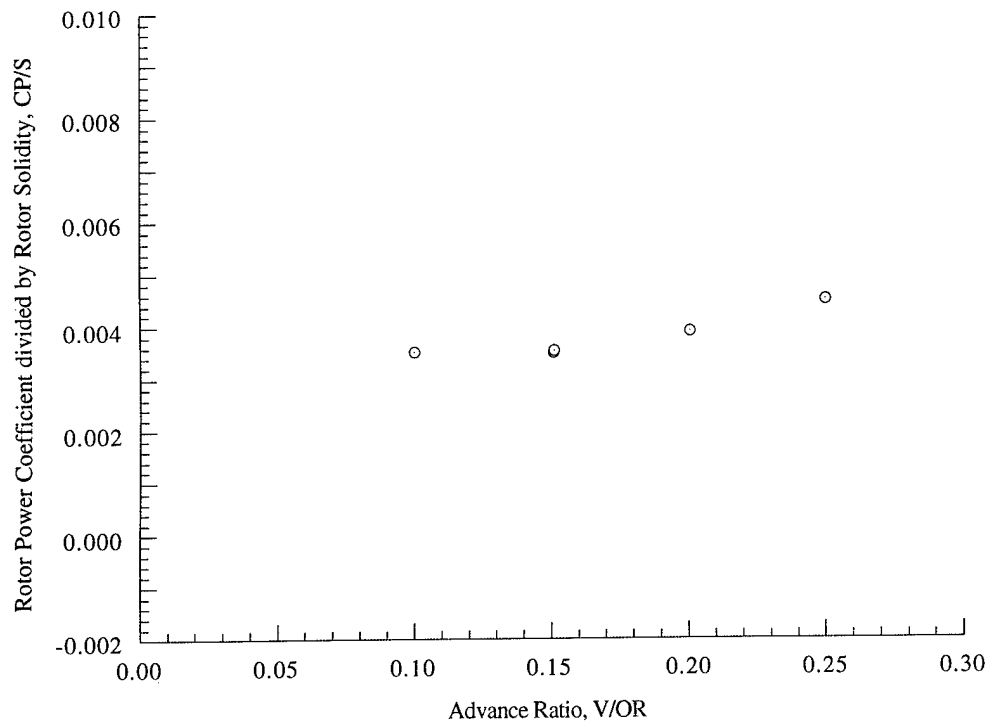


Figure 15(d). Rotor power coefficient as a function of advance ratio,  $\alpha_S = -10$  deg,  $C_T/\sigma = 0.060$ .

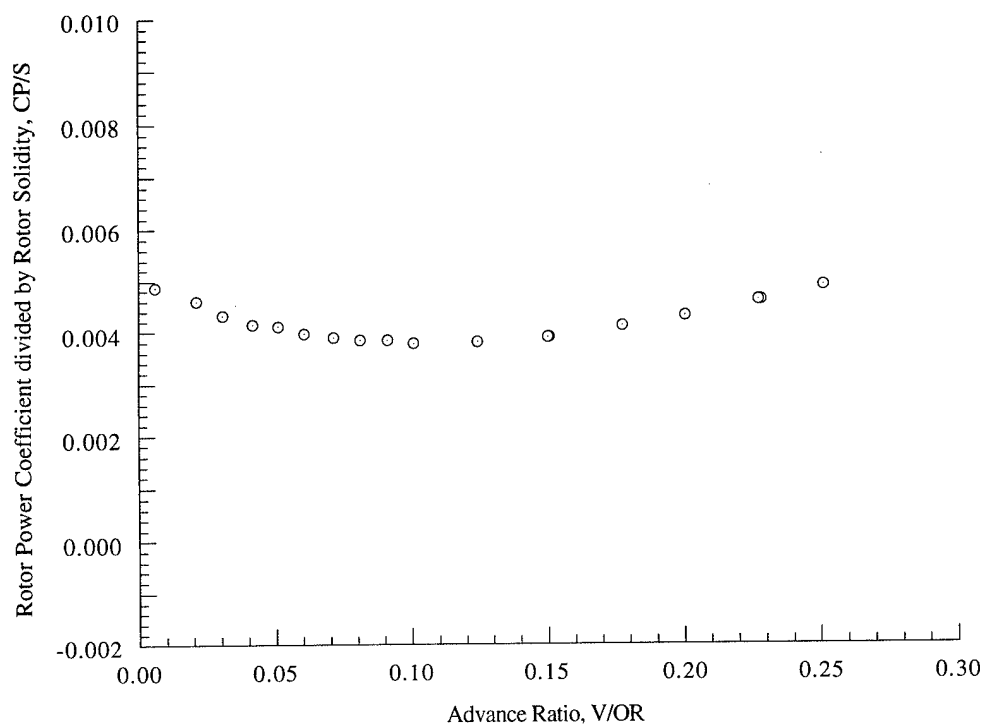


Figure 15(e). Rotor power coefficient as a function of advance ratio,  $\alpha_S = -10$  deg,  $C_T/\sigma = 0.065$ .

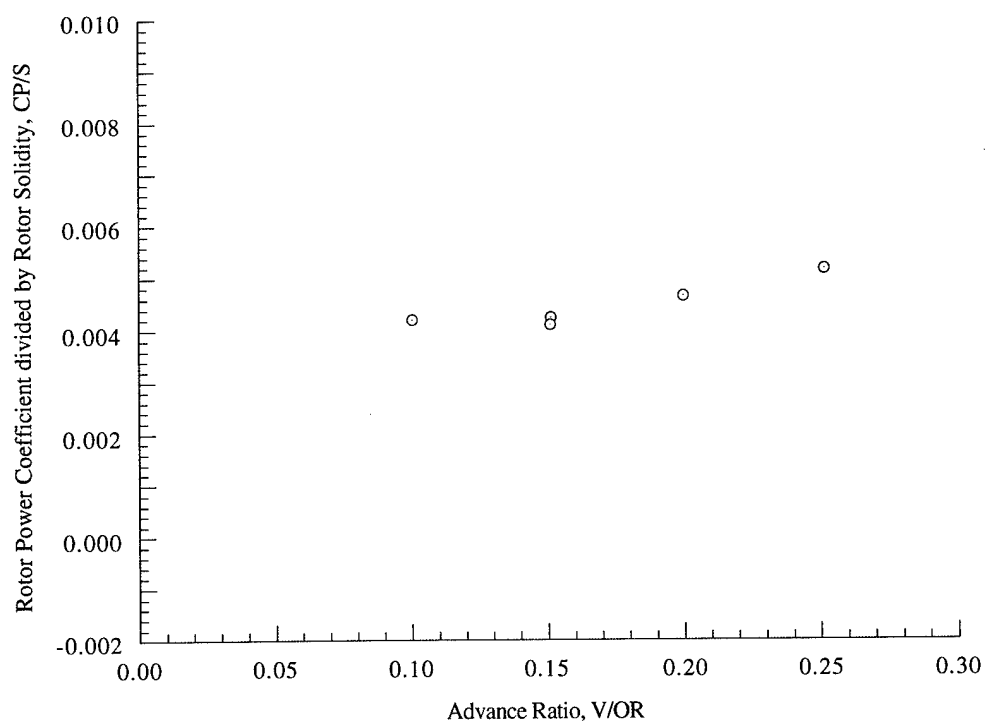


Figure 15(f). Rotor power coefficient as a function of advance ratio,  $\alpha_S = -10$  deg,  $C_T/\sigma = 0.070$ .

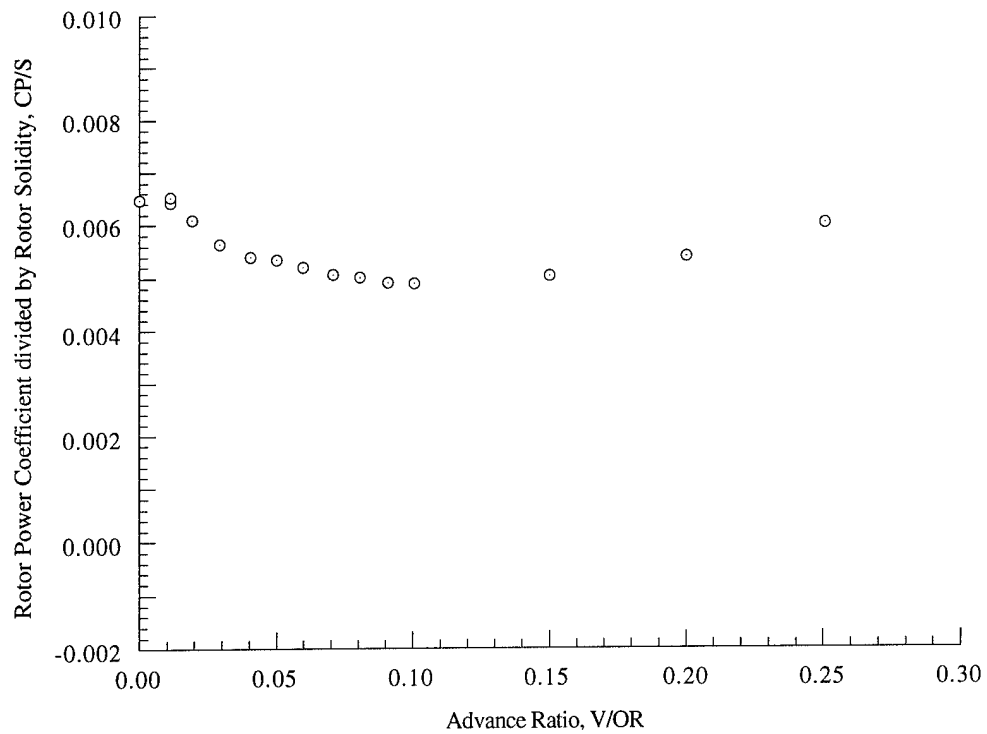


Figure 15(g). Rotor power coefficient as a function of advance ratio,  $\alpha_S = -10$  deg,  $C_T/\sigma = 0.080$ .

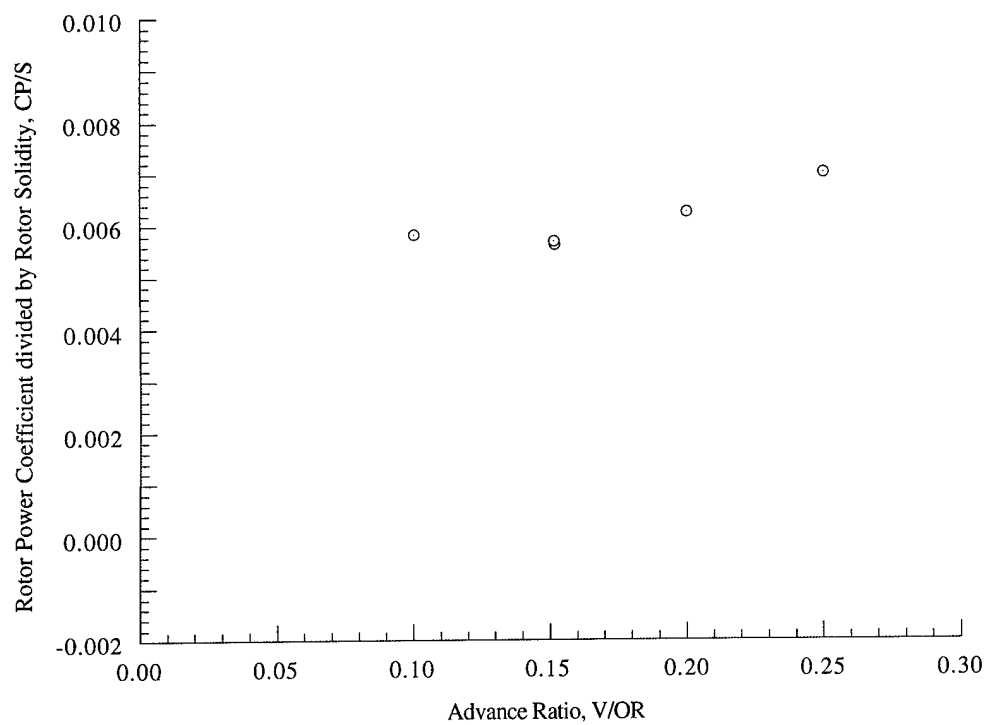


Figure 15(h). Rotor power coefficient as a function of advance ratio,  $\alpha_S = -10$  deg,  $C_T/\sigma = 0.090$ .

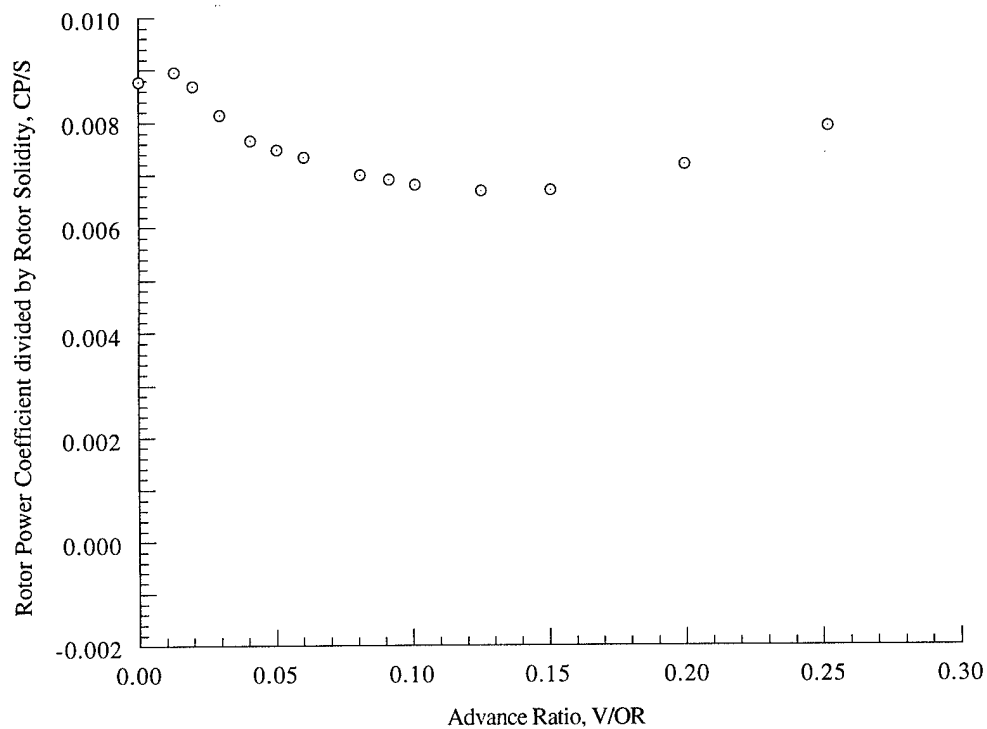


Figure 15(i). Rotor power coefficient as a function of advance ratio,  $\alpha_S = -10$  deg,  $C_T/\sigma = 0.100$ .

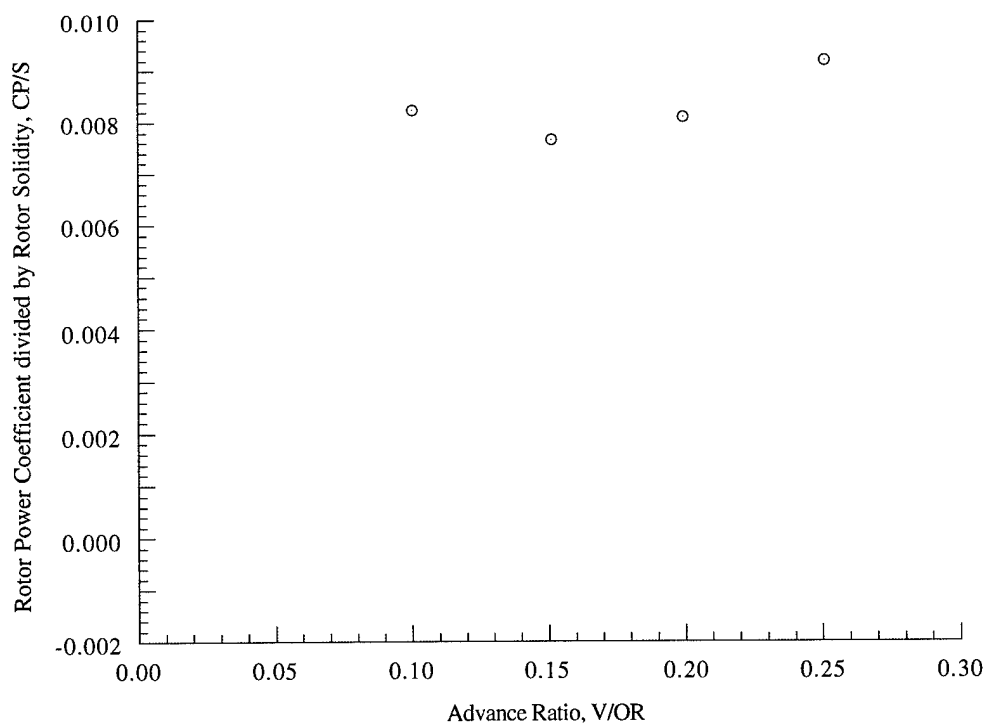


Figure 15(j). Rotor power coefficient as a function of advance ratio,  $\alpha_S = -10$  deg,  $C_T/\sigma = 0.110$ .

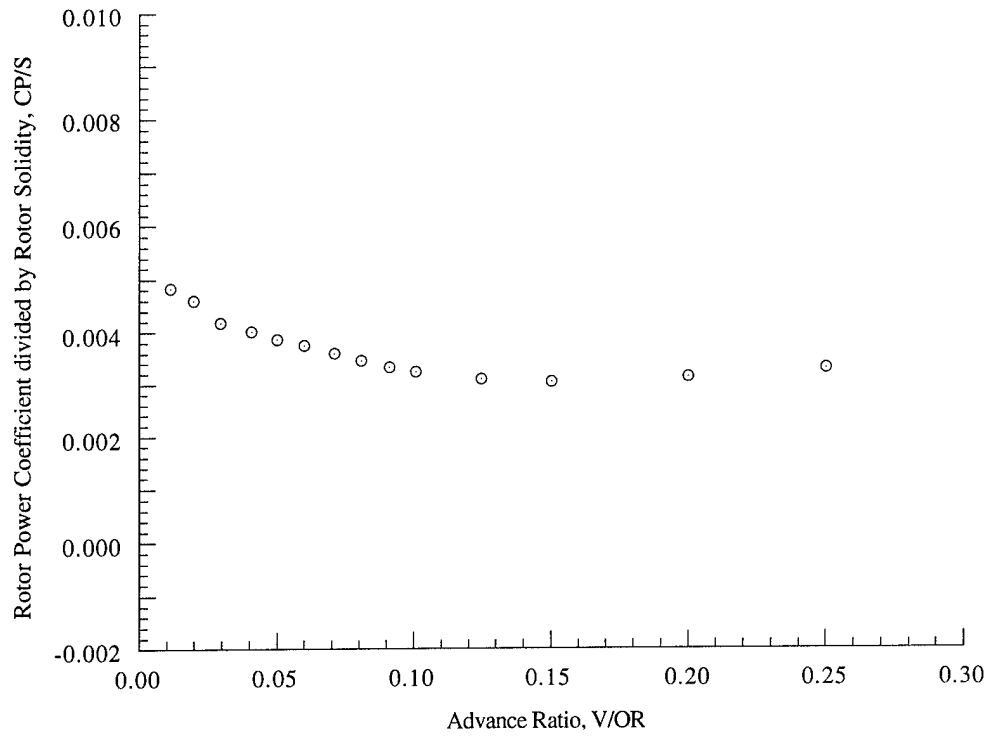


Figure 16(a). Rotor power coefficient as a function of advance ratio,  $\alpha_S = -5$  deg,  $C_T/\sigma = 0.065$ .

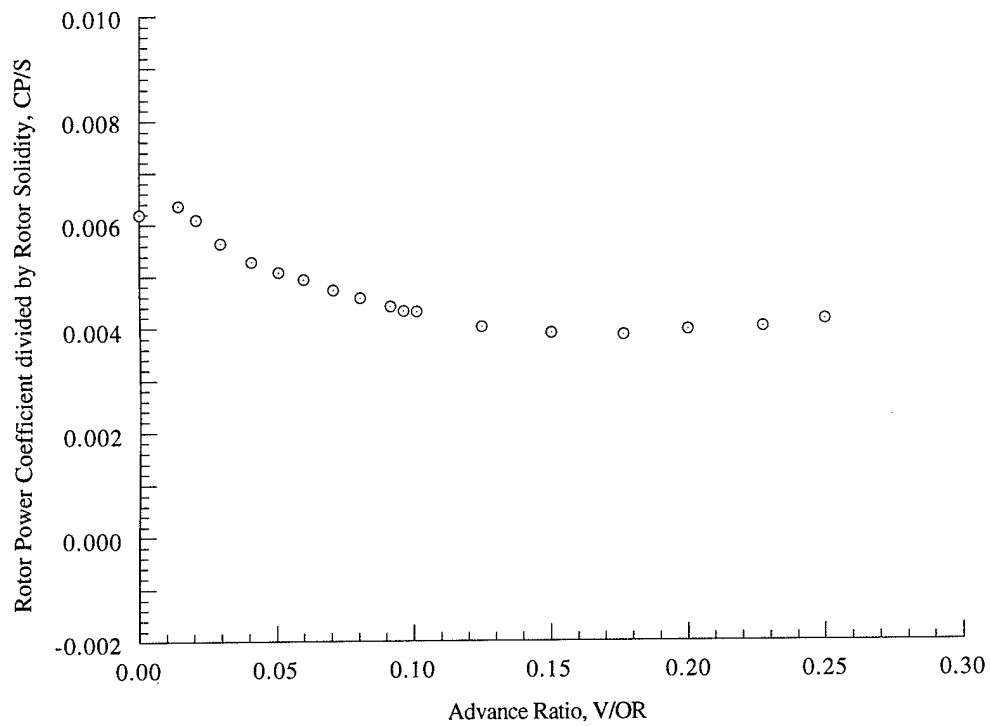


Figure 16(b). Rotor power coefficient as a function of advance ratio,  $\alpha_S = -5$  deg,  $C_T/\sigma = 0.080$ .

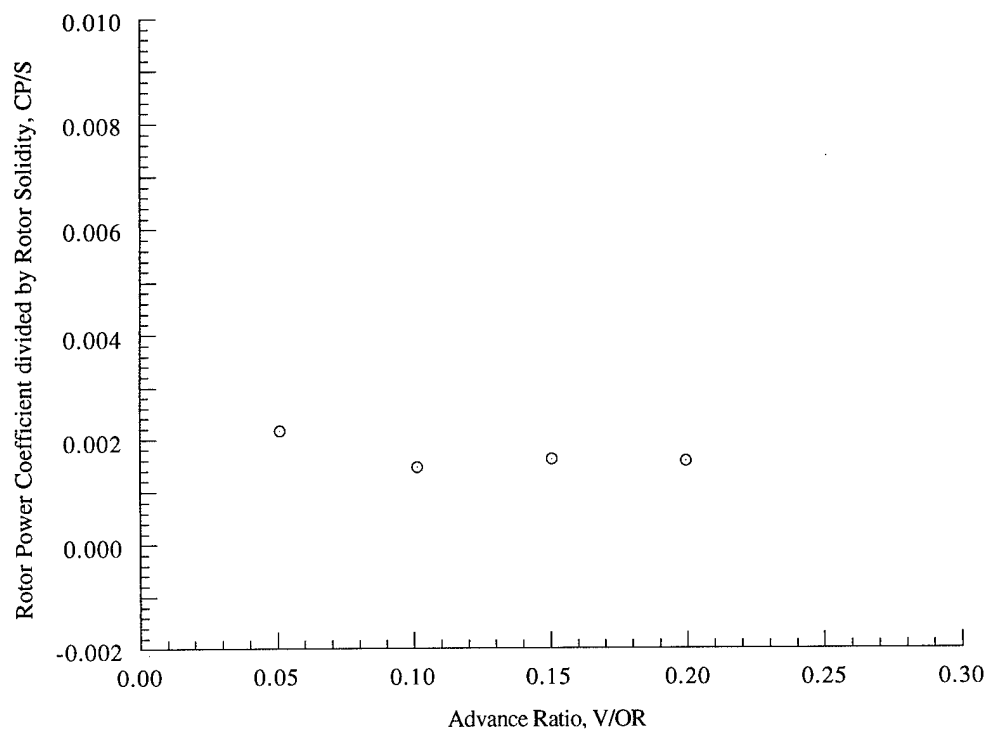


Figure 17(a). Rotor power coefficient as a function of advance ratio,  $\alpha_S = -2$  deg,  $C_T/\sigma = 0.040$ .

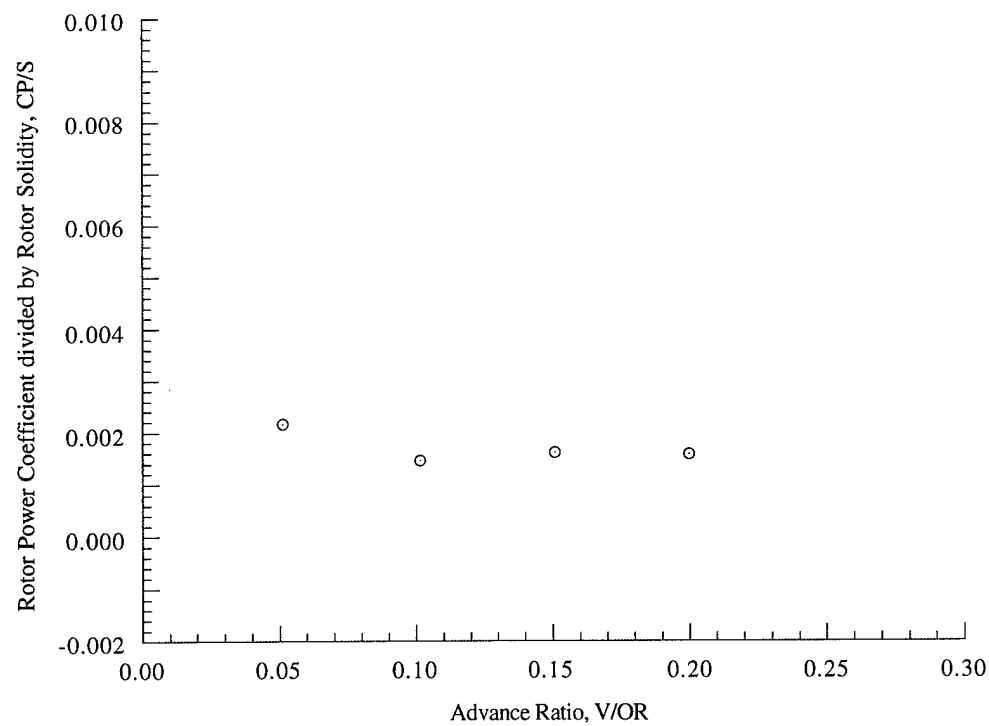


Figure 17(b). Rotor power coefficient as a function of advance ratio,  $\alpha_S = -2$  deg,  $C_T/\sigma = 0.050$ .

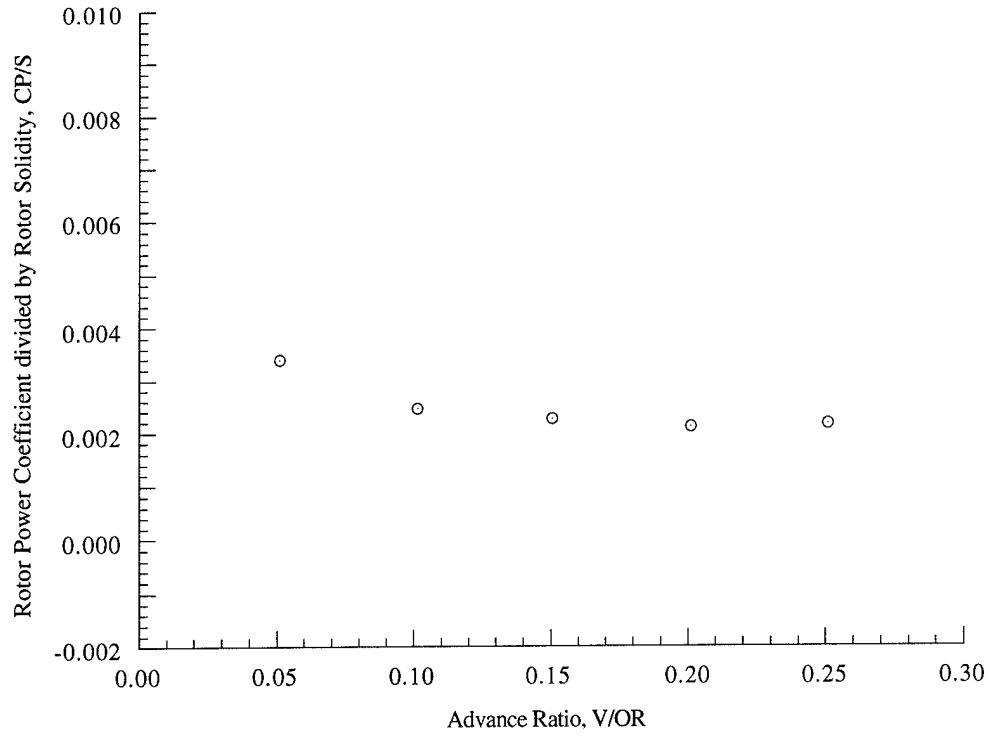


Figure 17(c). Rotor power coefficient as a function of advance ratio,  $\alpha_S = -2$  deg,  $C_T/\sigma = 0.060$ .

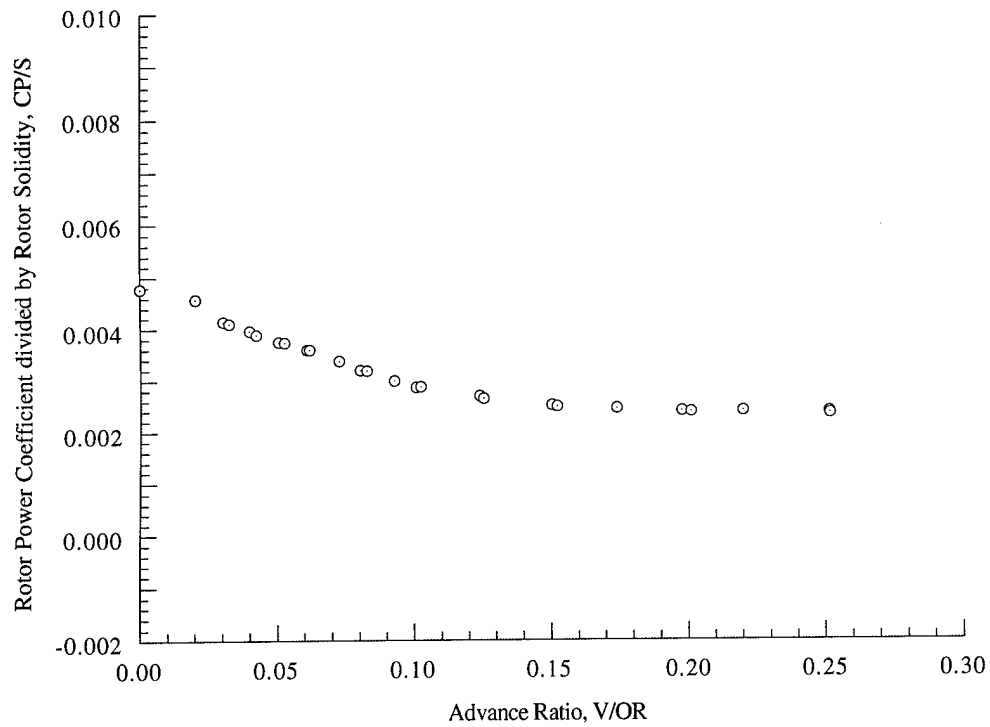


Figure 17(d). Rotor power coefficient as a function of advance ratio,  $\alpha_S = -2$  deg,  $C_T/\sigma = 0.065$ .

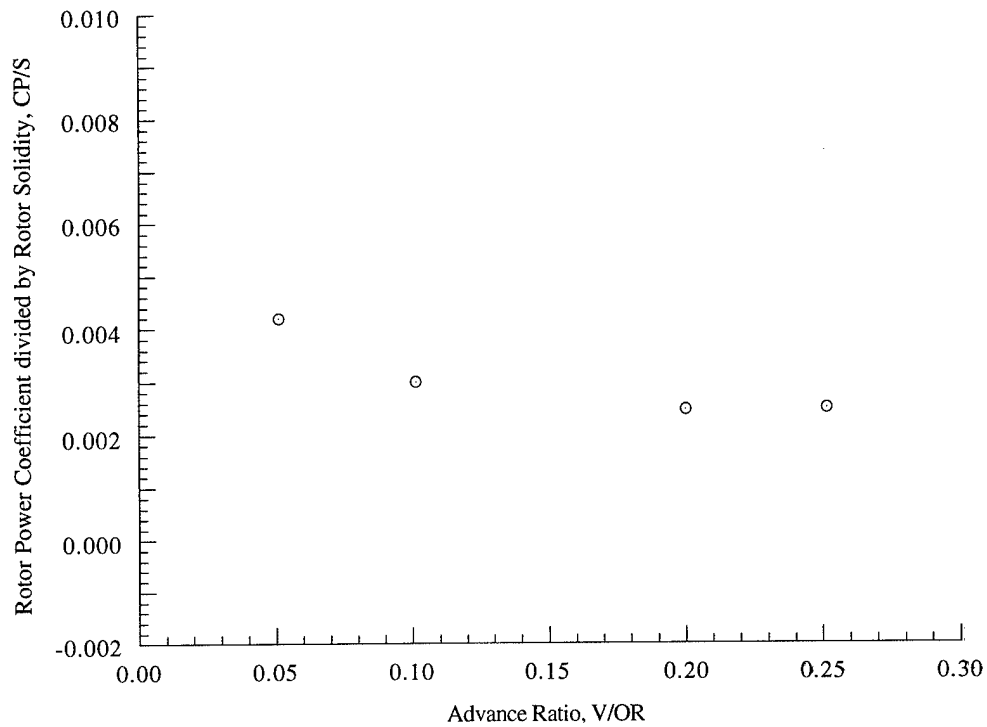


Figure 17(e). Rotor power coefficient as a function of advance ratio,  $\alpha_S = -2$  deg,  $C_T/\sigma = 0.070$ .

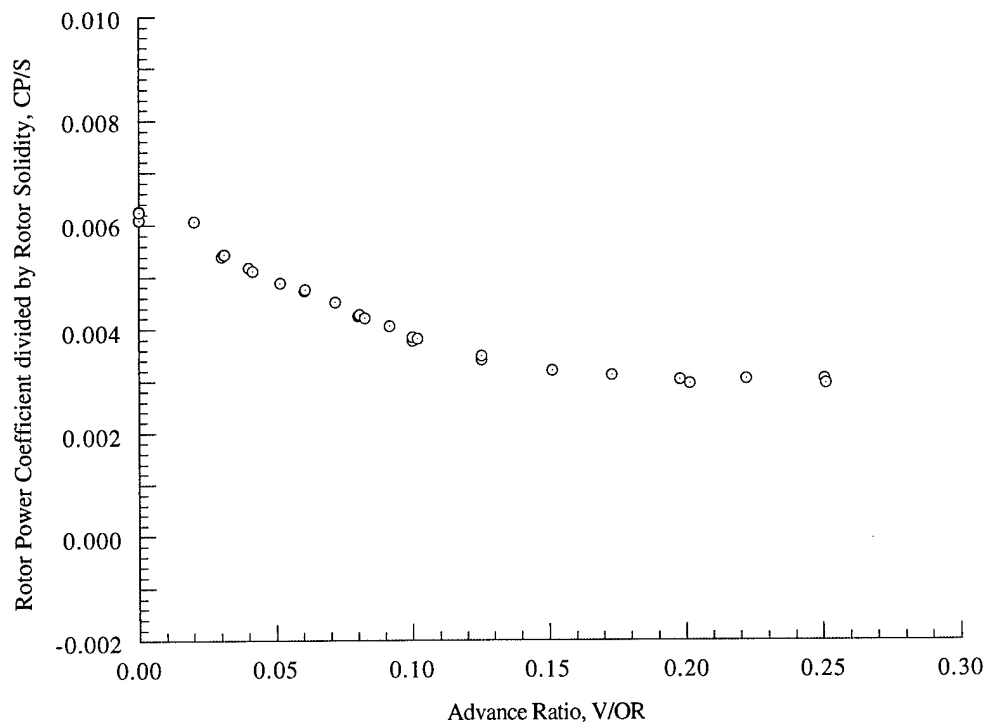


Figure 17(f). Rotor power coefficient as a function of advance ratio,  $\alpha_S = -2$  deg,  $C_T/\sigma = 0.080$ .



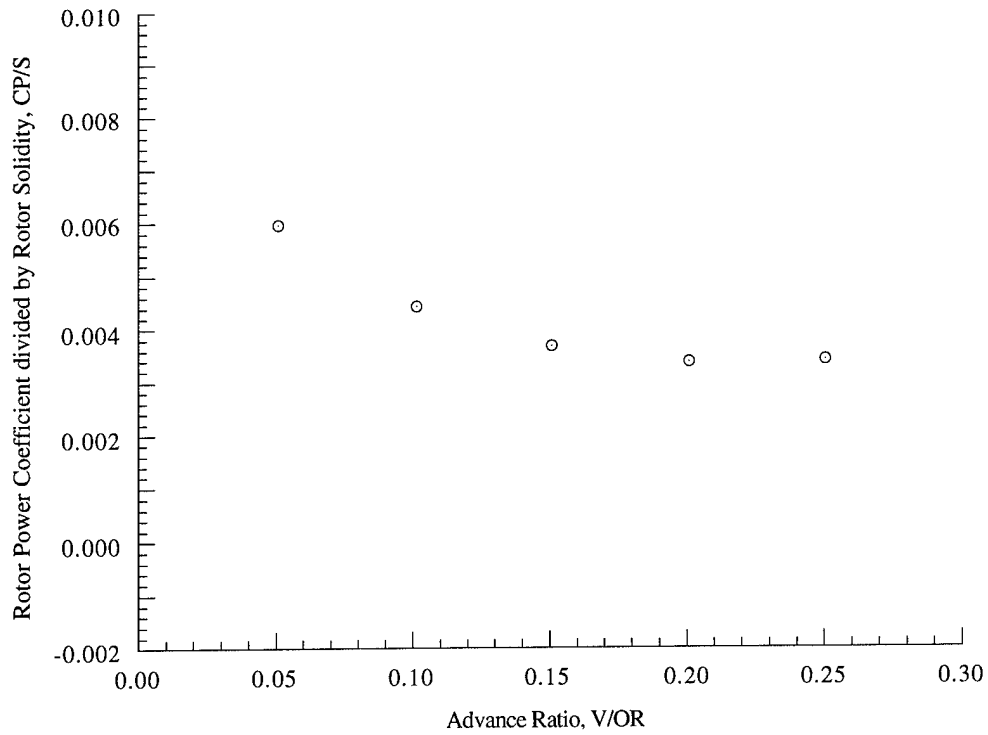


Figure 17(g). Rotor power coefficient as a function of advance ratio,  $\alpha_S = -2$  deg,  $C_T/\sigma = 0.090$ .

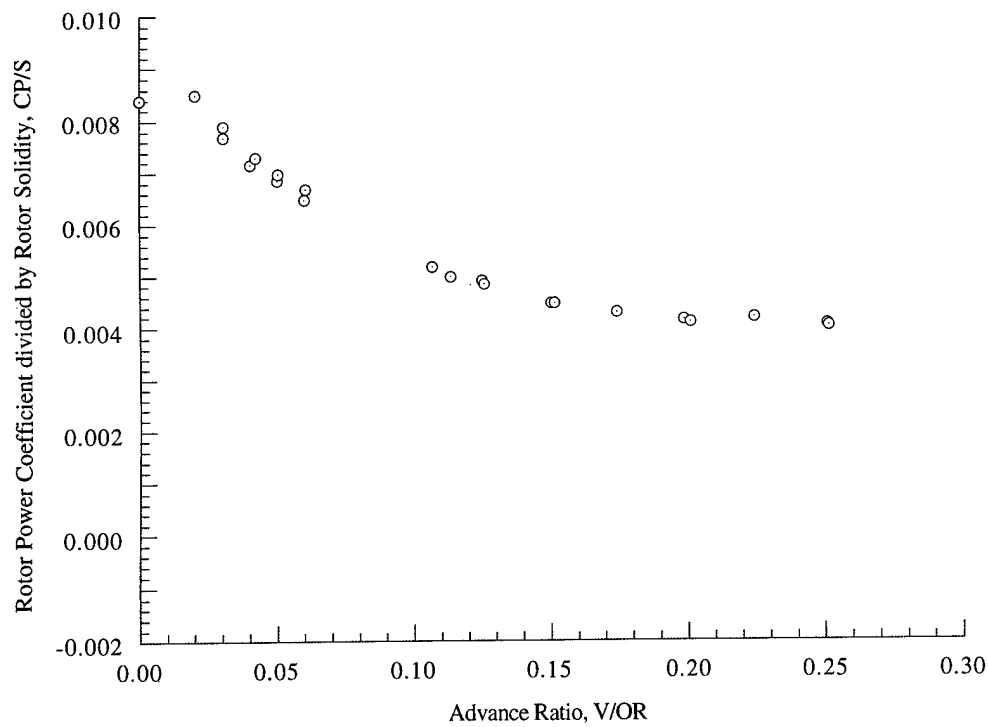


Figure 17(h). Rotor power coefficient as a function of advance ratio,  $\alpha_S = -2$  deg,  $C_T/\sigma = 0.100$ .

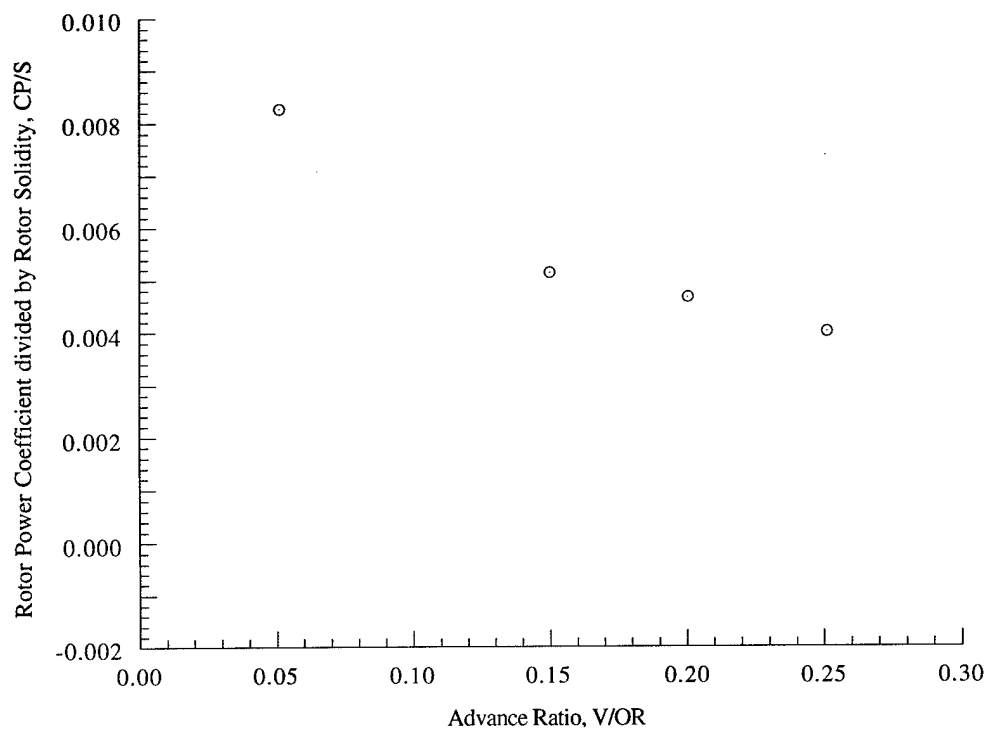


Figure 17(i). Rotor power coefficient as a function of advance ratio,  $\alpha_S = -2$  deg,  $C_T/\sigma = 0.110$ .

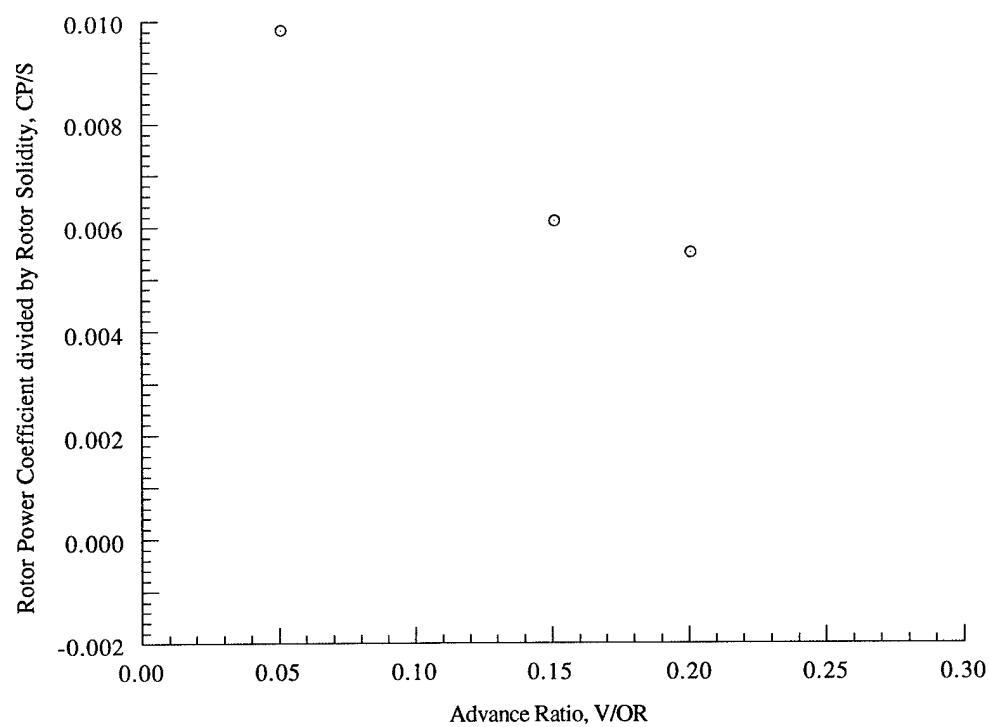


Figure 17(j). Rotor power coefficient as a function of advance ratio,  $\alpha_S = -2$  deg,  $C_T/\sigma = 0.120$ .

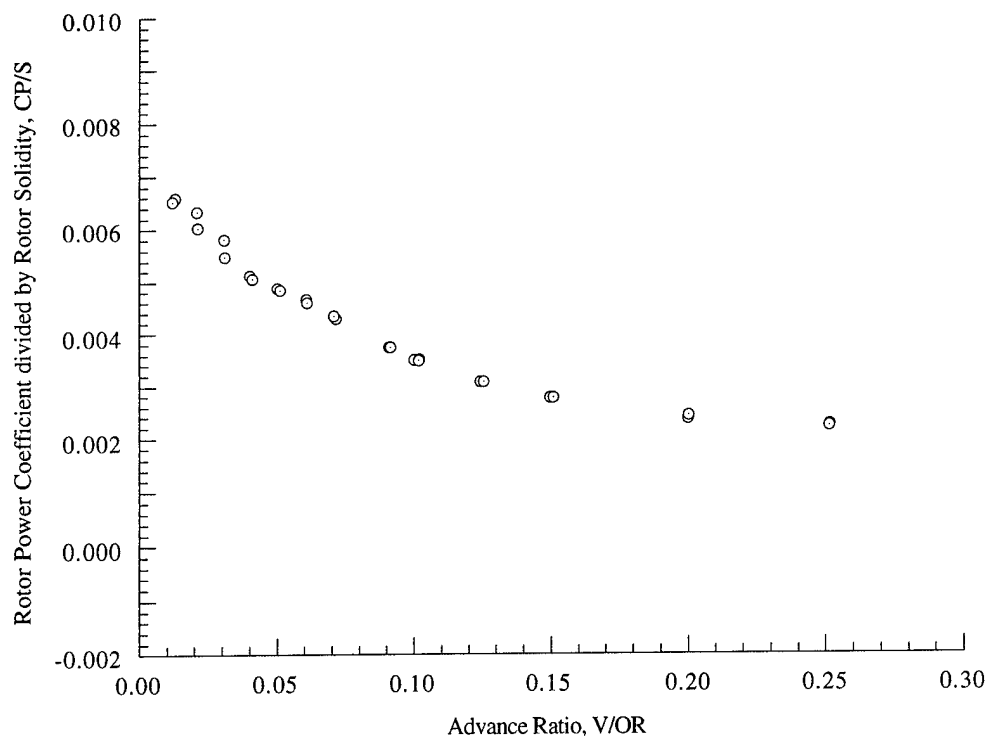


Figure 18(a). Rotor power coefficient as a function of advance ratio,  $\alpha_S = 0$  deg,  $C_T/\sigma = 0.080$ .

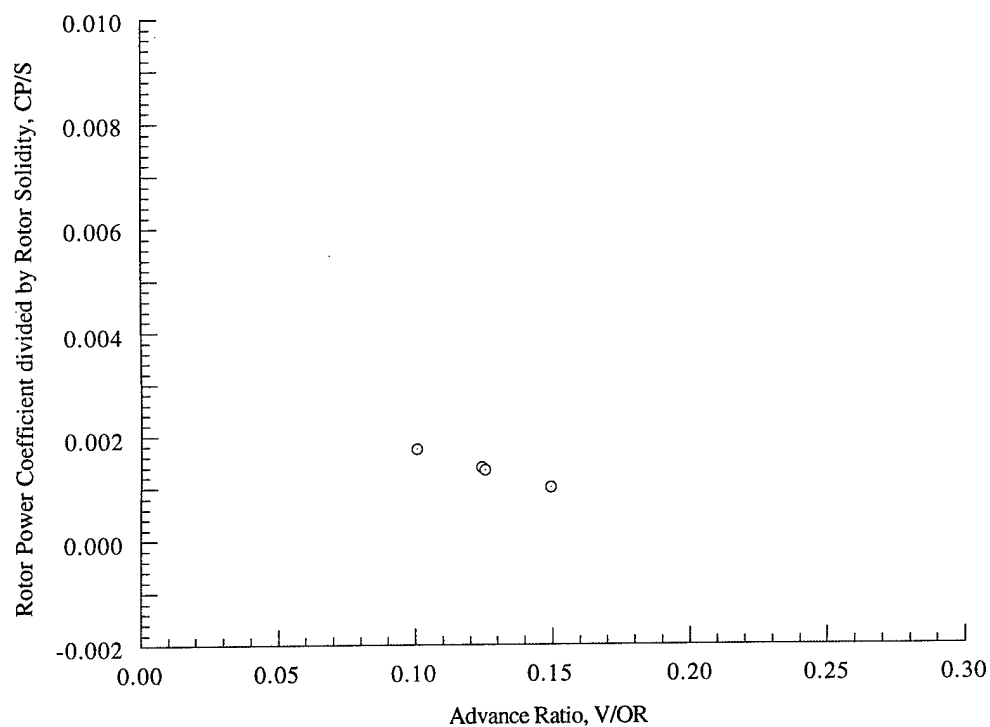


Figure 19(a). Rotor power coefficient as a function of advance ratio,  $\alpha_S = 5$  deg,  $C_T/\sigma = 0.060$ .

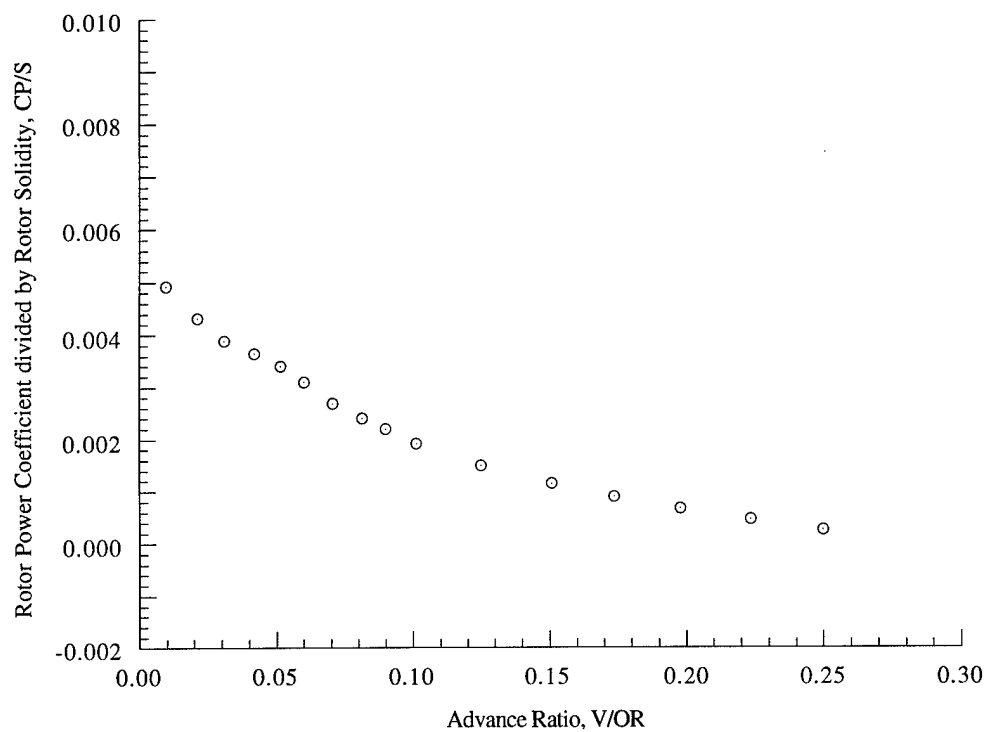


Figure 19(b). Rotor power coefficient as a function of advance ratio,  $\alpha_S = 5$  deg,  $C_T/\sigma = 0.065$ .

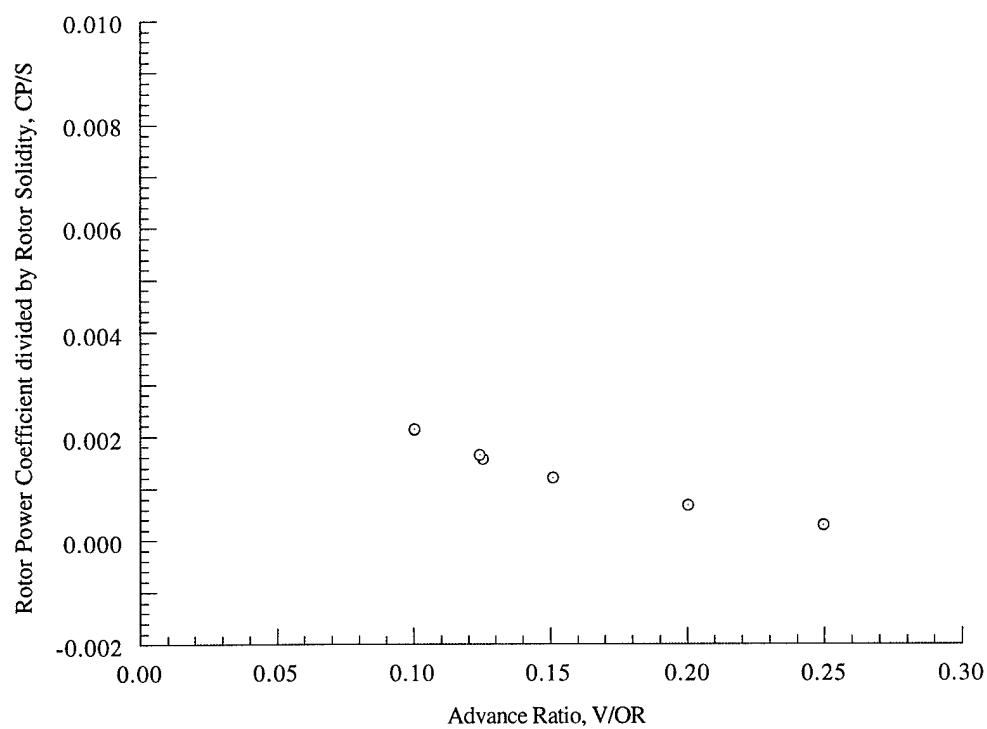


Figure 19(c). Rotor power coefficient as a function of advance ratio,  $\alpha_S = 5$  deg,  $C_T/\sigma = 0.070$ .

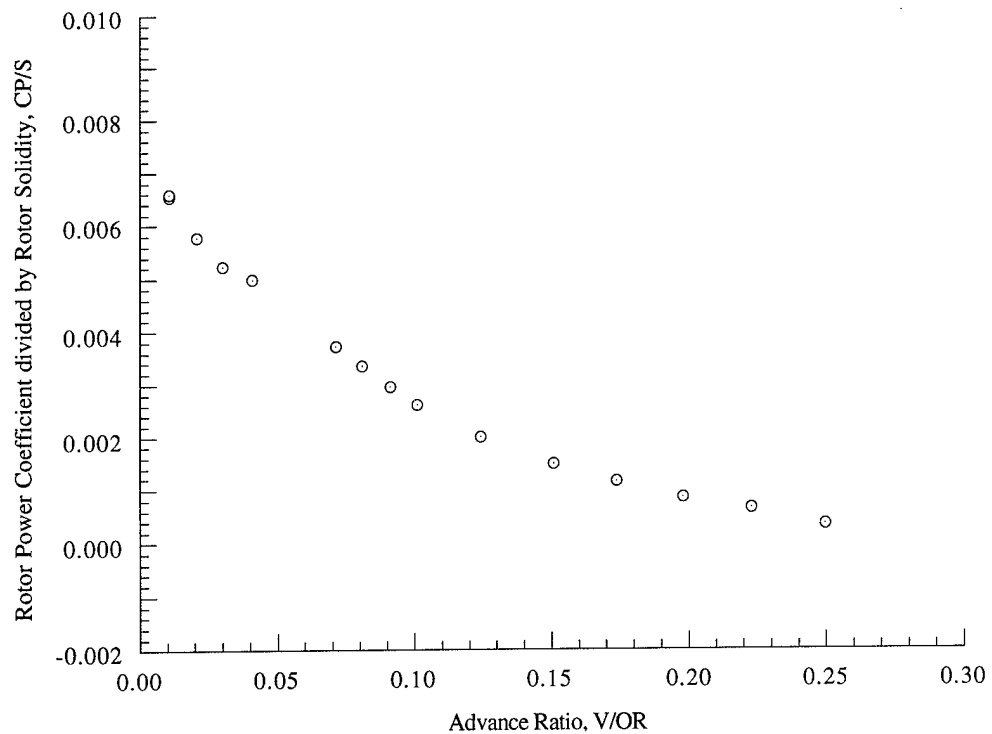


Figure 19(d). Rotor power coefficient as a function of advance ratio,  $\alpha_S = 5$  deg,  $C_T/\sigma = 0.080$ .

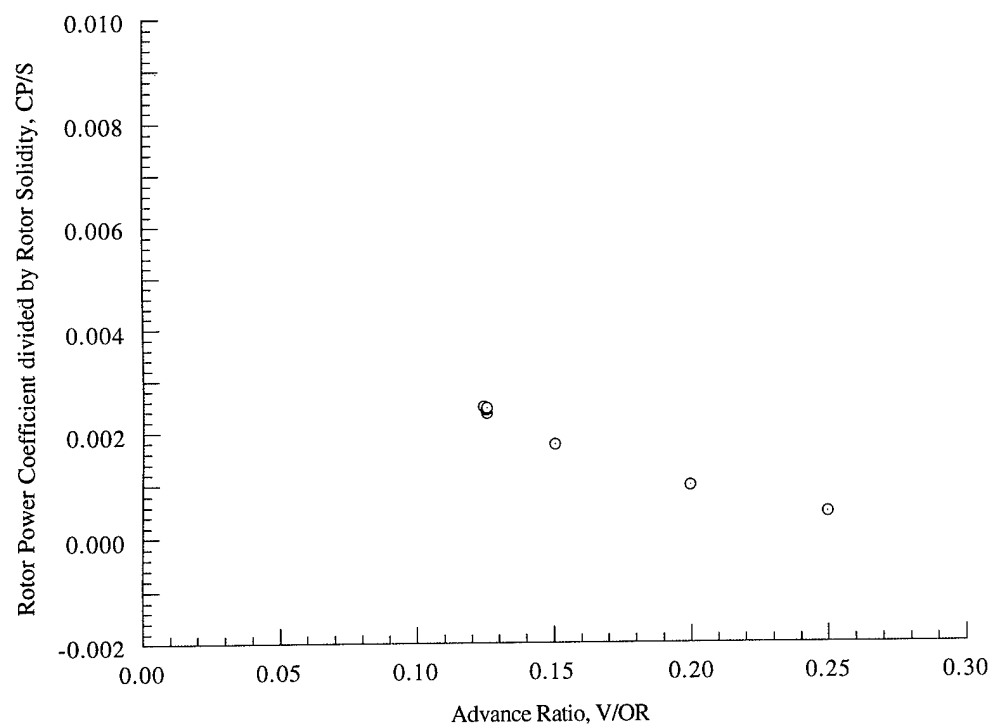


Figure 19(e). Rotor power coefficient as a function of advance ratio,  $\alpha_S = 5$  deg,  $C_T/\sigma = 0.090$ .

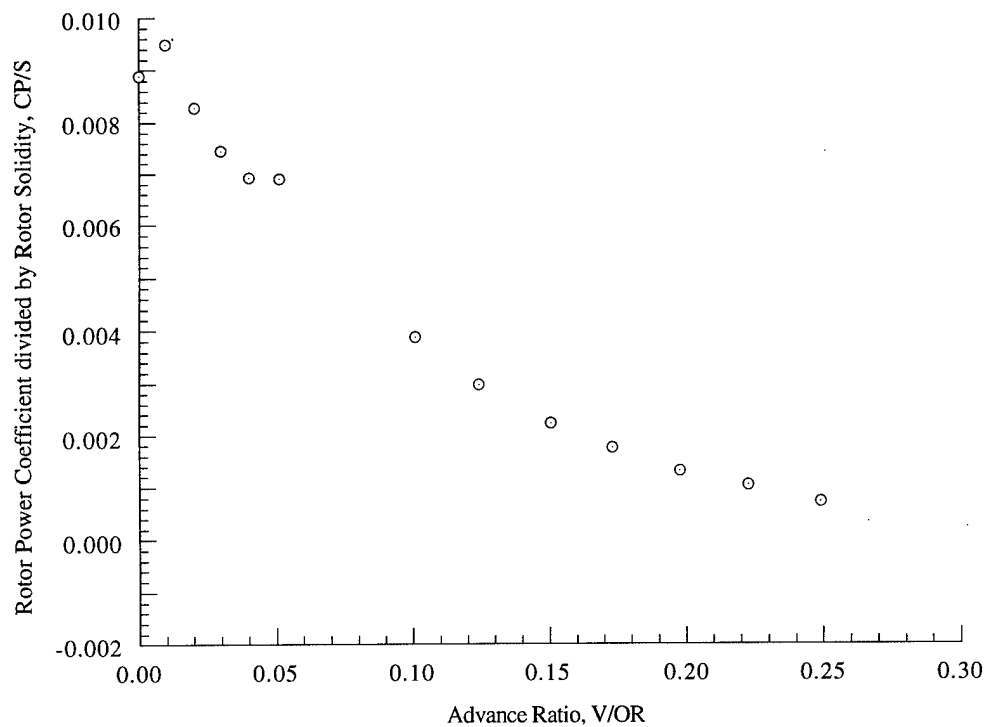


Figure 19(f). Rotor power coefficient as a function of advance ratio,  $\alpha_S = 5$  deg,  $CT/\sigma = 0.100$ .

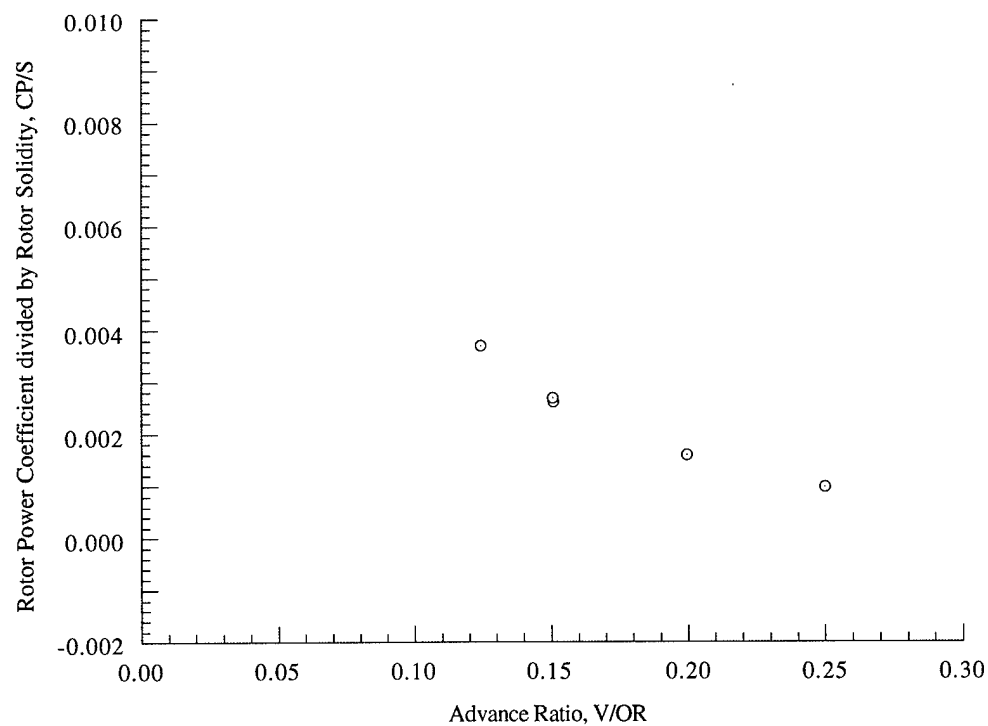


Figure 19(g). Rotor power coefficient as a function of advance ratio,  $\alpha_S = 5$  deg,  $CT/\sigma = 0.110$ .

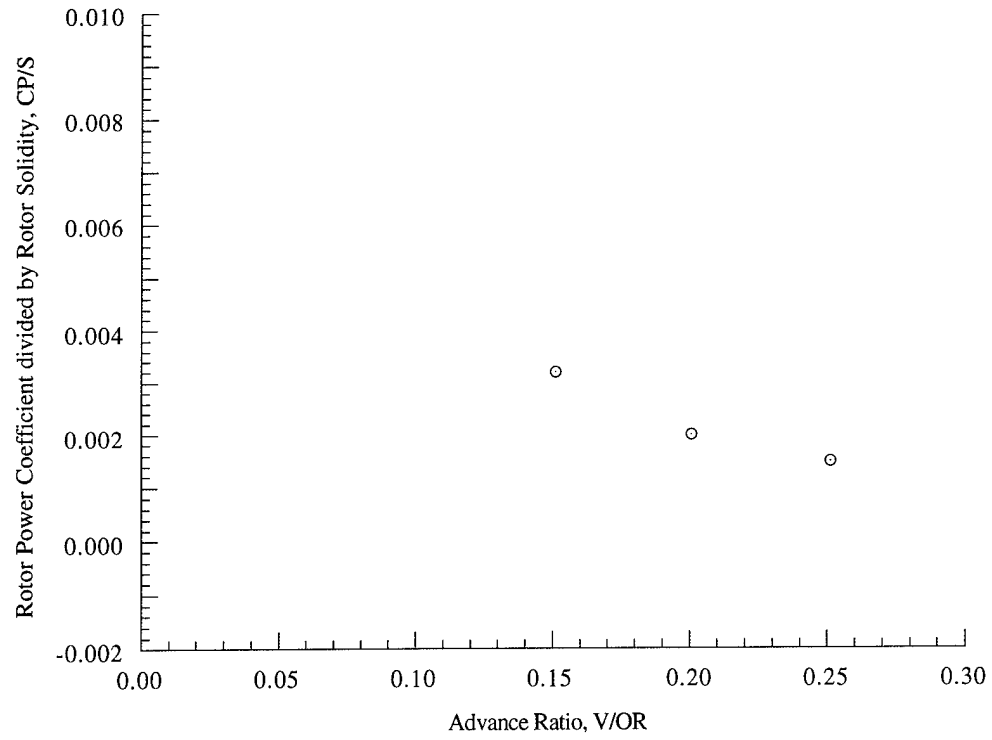


Figure 19(h). Rotor power coefficient as a function of advance ratio,  $\alpha_S = 5$  deg,  $CT/\sigma = 0.120$ .

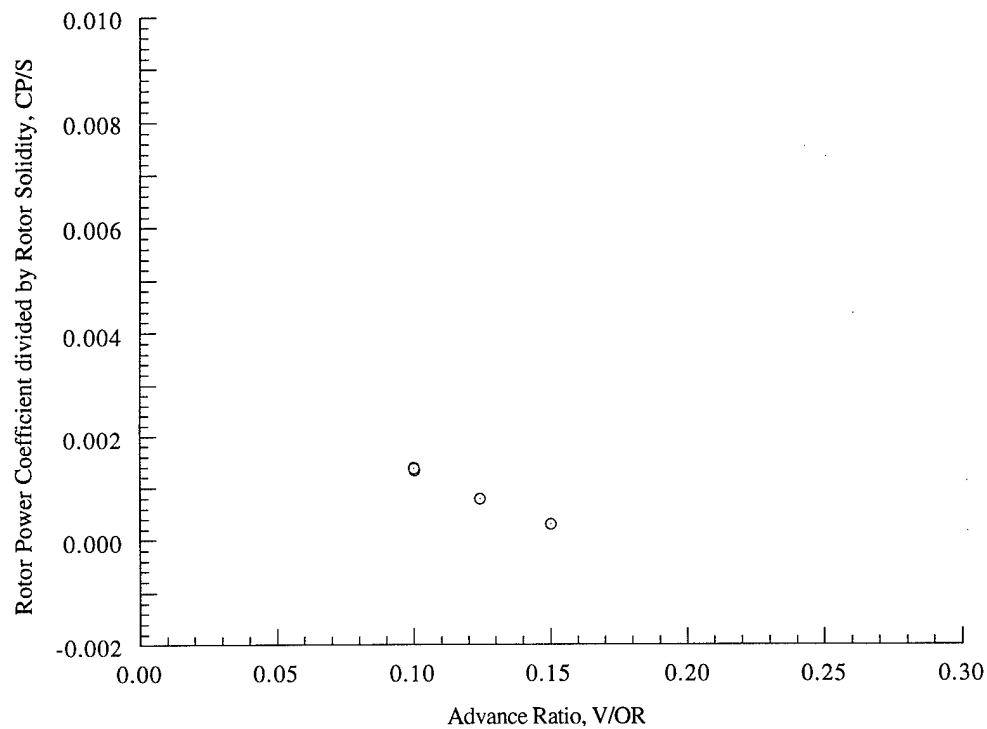


Figure 20(a). Rotor power coefficient as a function of advance ratio,  $\alpha_S = 10$  deg,  $C_T/\sigma = 0.070$ .

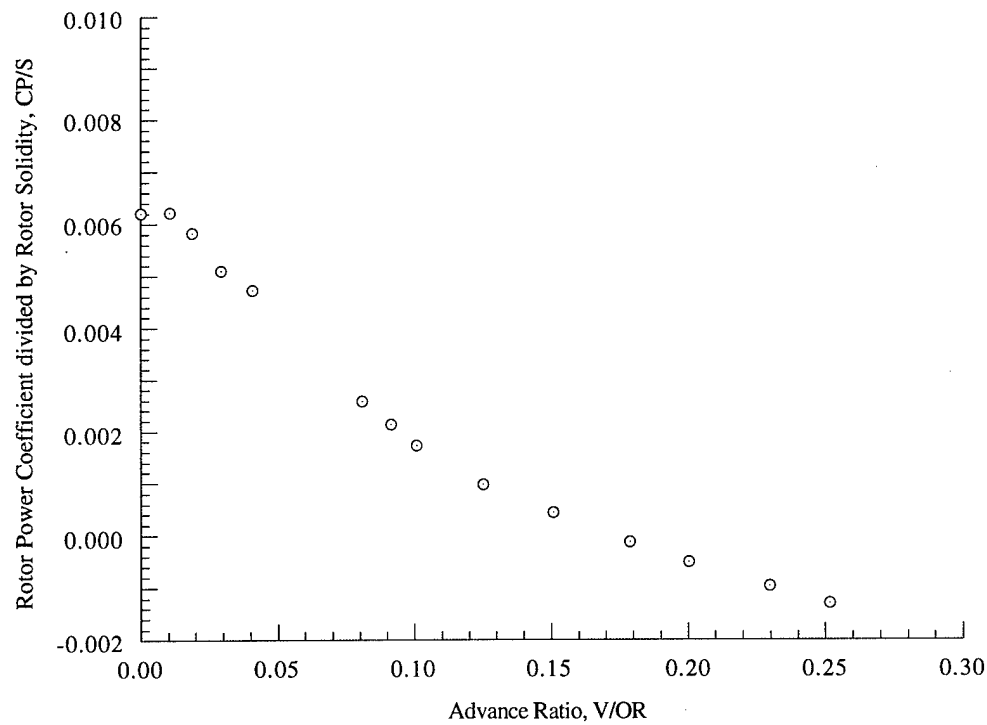


Figure 20(b). Rotor power coefficient as a function of advance ratio,  $\alpha_S = 10$  deg,  $C_T/\sigma = 0.080$ .



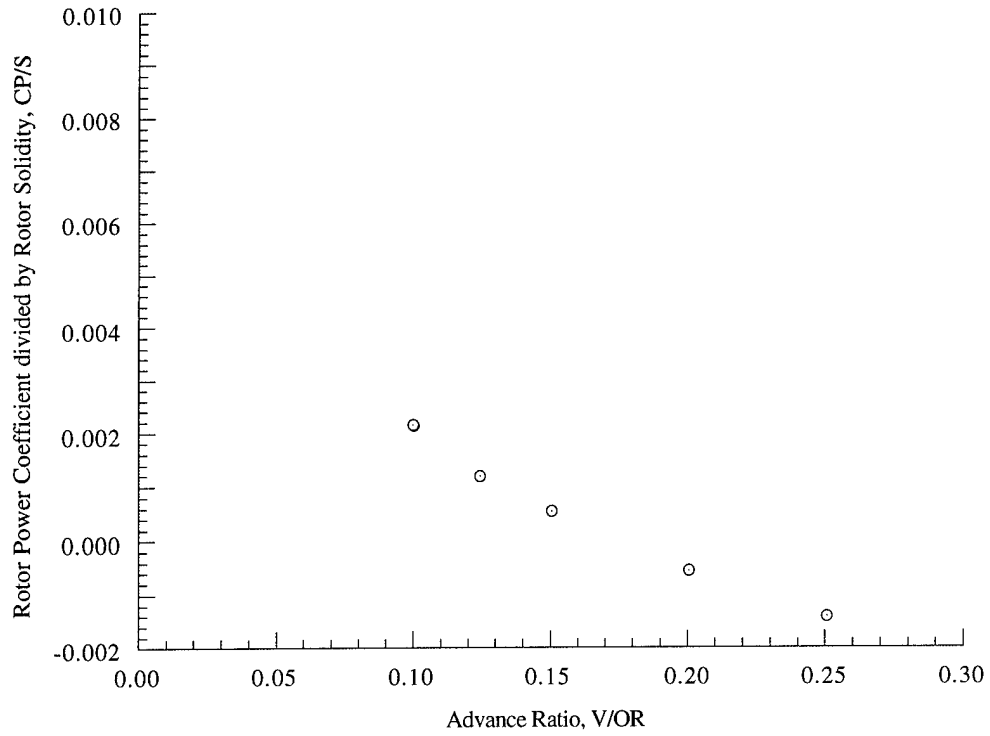


Figure 20(c). Rotor power coefficient as a function of advance ratio,  $\alpha_S = 10$  deg,  $C_T/\sigma = 0.090$ .

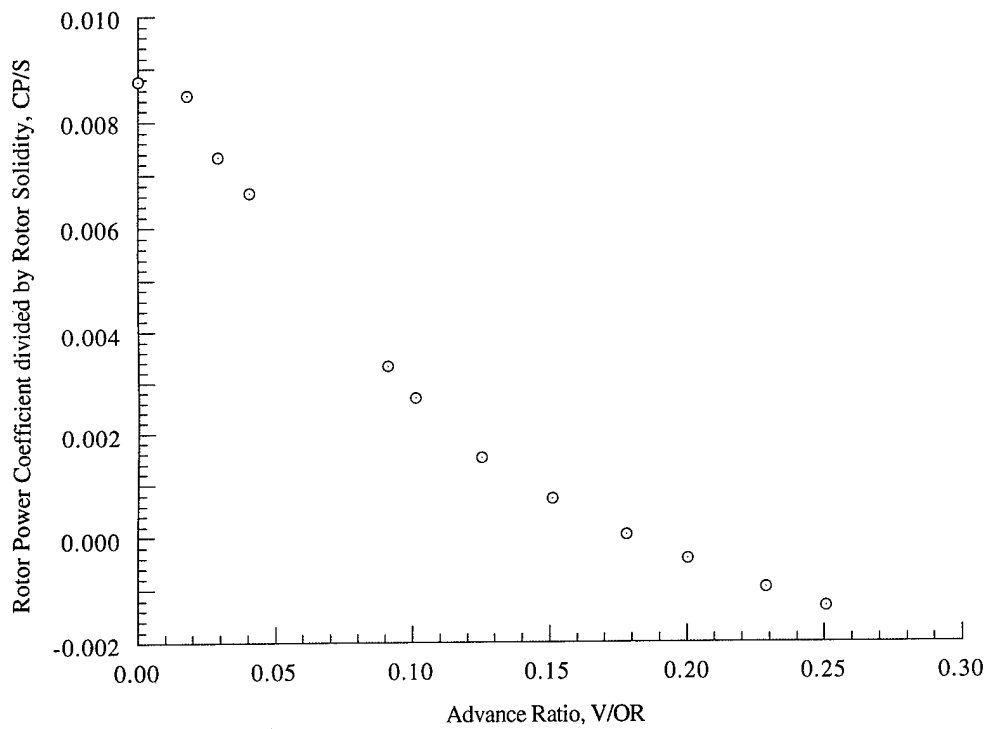


Figure 20(d). Rotor power coefficient as a function of advance ratio,  $\alpha_S = 10$  deg,  $C_T/\sigma = 0.100$ .

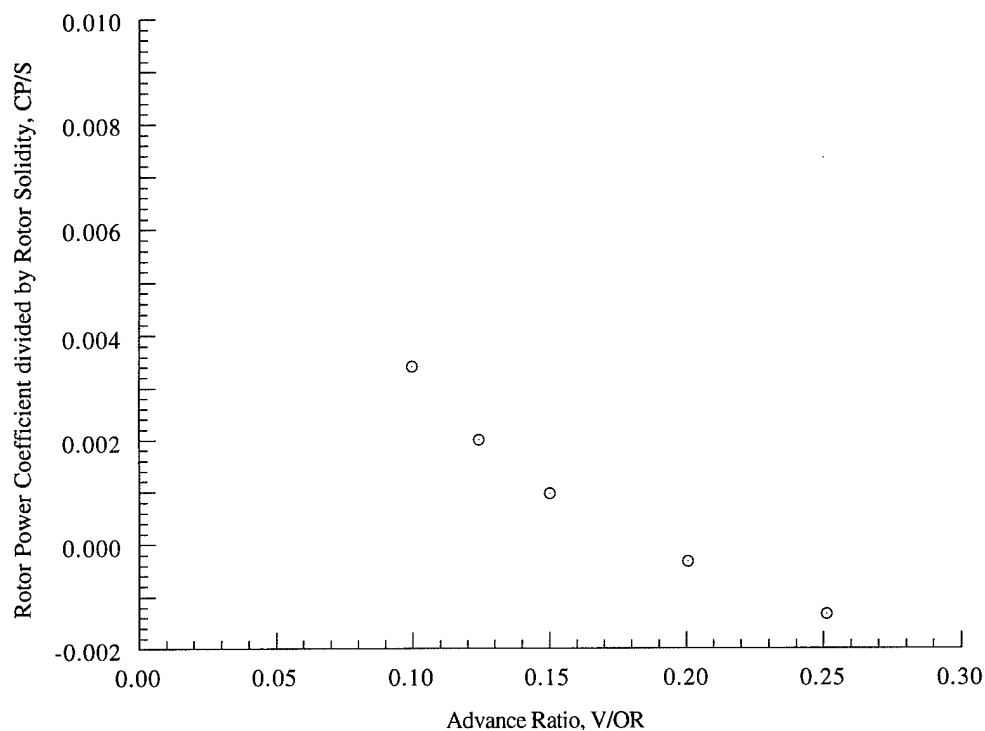


Figure 20(e). Rotor power coefficient as a function of advance ratio,  $\alpha_S = 10$  deg,  $C_T/\sigma = 0.110$ .

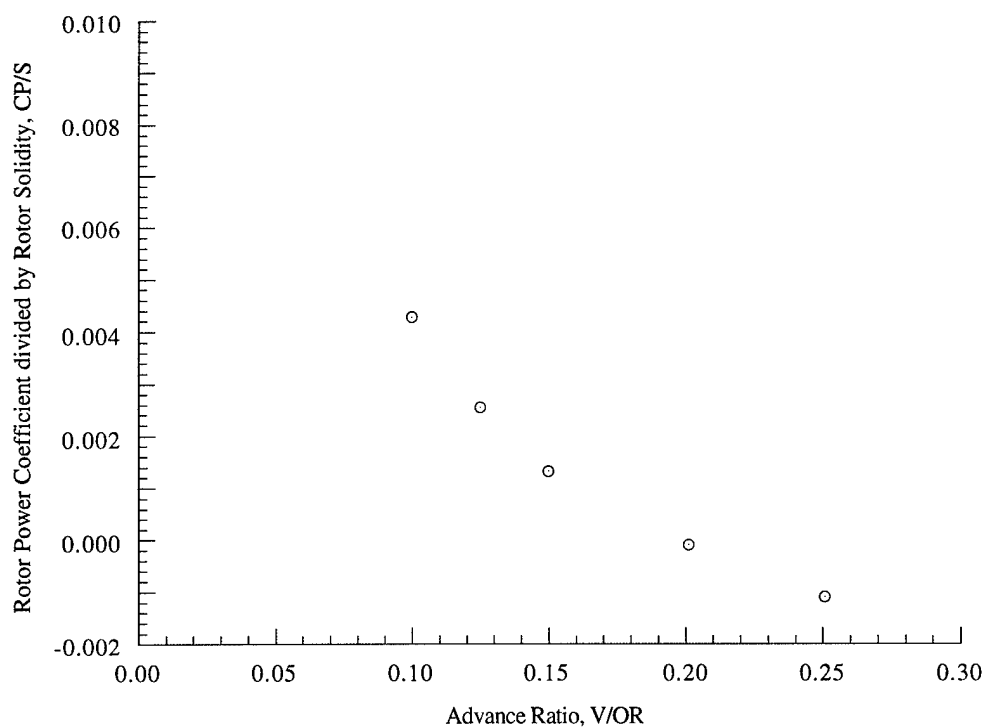


Figure 20(f). Rotor power coefficient as a function of advance ratio,  $\alpha_S = 10$  deg,  $C_T/\sigma = 0.120$ .

## **APPENDIX A**

### **HOVER PERFORMANCE DATA**

## Hover Performance Data

Performance data for hover conditions with minimized flapping trim are presented in tabulated form in this appendix. Data runs are grouped in terms of shaft angle-of-attack,  $\alpha_s$ . No wall or ground effect corrections have been applied to this data. Definitions of the measurements that are presented in this section are shown below. Identification of test conditions and its location within this appendix are presented following these definitions.

### Nomenclature

A	rotor disk area, $\pi R^2$ , ft <sup>2</sup>
ALFS,U , $\alpha_s$	rotor shaft angle, positive aft of vertical, deg
A1	coefficient in the representation of rotor blade lateral cyclic pitch (fixed system measurement) $\theta = \text{THETA} - A1 \cos \psi - B1 \sin \psi$ , deg
b	number of rotor blades
B1	coefficient in the representation of rotor blade longitudinal cyclic pitch (fixed system measurement) $\theta = \text{THETA} - A1 \cos \psi - B1 \sin \psi$ , deg
BARO	atmospheric pressure, lb/ft <sup>2</sup>
c	blade mean airfoil chord length, ft
CLRH/S	rotor lift force coefficient divided by rotor solidity, wind axis, positive up, $\text{LIFTH,C}/\rho(\Omega R)^2 S_R$
CLRHS/S	rotor lift force coefficient divided by rotor solidity, shaft axis, $\text{LIFTH,S}/\rho(\Omega R)^2 S_R$
CMXHS/S	rotor rolling moment coefficient divided by rotor solidity, shaft axis, $\text{ROLLH,S}/\rho S_R(\Omega R)^2 R$
CMYHS/S	rotor pitching moment coefficient divided by rotor solidity, shaft axis, $\text{PITCHH,S}/\rho S_R(\Omega R)^2 R$
CONING	mean flap angle, deg
CP	rotor power coefficient, $\text{POW}/\rho A(\Omega R)^3$
CP/S	rotor power coefficient divided by rotor solidity, $\text{POW}/\rho(\Omega R)^3 S_R$
CPO/S	rotor non-ideal power coefficient divided by rotor solidity, $\text{CP/S} - \text{CP/S ideal}$
C <sub>s</sub>	speed of sound, ft/s
CTH	rotor thrust coefficient, perpendicular to rotor tip-path-plane, $\text{THRUST}/\rho A(\Omega R)^2$
CTH/S	rotor thrust coefficient divided by rotor solidity, $\text{THRUST}/\rho(\Omega R)^2 S_R$
CXRH/S	rotor propulsive force coefficient divided by rotor solidity, wind axis, positive forward, $-\text{DRAGH,C}/\rho(\Omega R)^2 S_R$
CXRHS/S	rotor propulsive force coefficient divided by rotor solidity, shaft axis, positive forward, $-\text{DRAGH,S}/\rho(\Omega R)^2 S_R$

CYRH/S	rotor side force coefficient divided by rotor solidity, wind axis, $SIDEH,C/\rho(\Omega R)^2 S_R$
CYRHS/S	rotor side force coefficient divided by rotor solidity, shaft axis, $SIDEH,S/\rho(\Omega R)^2 S_R$
DRAGH,C	rotor wind-axis drag, positive downstream, lb
DRAGH,S	rotor shaft-axis drag, positive downstream, lb
FMERIT	Figure of Merit, $CTH^{3/2}/CP*(2)^{1/2}$
HFORCE	rotor propulsive force, shaft axis, positive forward, lb
HP	rotor horsepower, $POW/550$
LIFTH,C	rotor wind-axis lift, positive up, lb
LIFTH,S	rotor shaft-axis lift, positive up, lb
MTUN	tunnel Mach number, $V/CS$
MTIP	rotor rotational tip Mach number, $\Omega R/CS$
OMEG*R	rotor tip speed, $\Omega R$ , ft/sec
PITCHH,S	rotor shaft-axis pitching moment, positive nose up, ft-lb
POINT	data point number
POW	rotor shaft power, $TORQ,C * \Omega$ , ft-lb/s
QPSF	free-stream dynamic pressure, lb/ft <sup>2</sup>
R	rotor radius, ft
RHO, $\rho$	free-stream air density, $\rho$ , slug/ft <sup>3</sup>
ROLLH,S	rotor shaft-axis rolling moment, positive right wing down, ft-lb
RPM	rotor rotation rate, rev/min.
RUN	data run number
SIDEH,C	rotor side force, wind-axis, positive right, lb
SIDEH,S	rotor side force, shaft-axis, positive right, lb
$S_R$	rotor blade area, $bcR$ , ft <sup>2</sup>
THETA	rotor collective( fixed system measurments), deg
THRUST	rotor thrust, perpendicular to tip-path-plane, positive up, lb
TORQ,C , TQ	flexcoupling or rotor shaft torque, ft-lb

TTEMPF	tunnel air temp, F°
V/OR, $\mu$	rotor advance ratio, $V/\Omega R$
V	free-stream velocity, ft/s
VKTS	free-stream velocity, kt
YAW	relative model yaw position to free-stream velocity, positive yaw right, deg
$\theta$	blade pitch at specific blade azimuth position ( $\psi$ ), deg
$\sigma$	rotor solidity, $bc/\pi R$
$\psi$	rotor blade azimuth angle measured from downwind position in direction of rotation, deg
$\Omega$	rotor rotational speed, rad/s

### Hover Performance Data Index

YAW deg	ALFS,U deg	RUN	PTS	CTH/S	DATA LOCATION
0	-15	43	9-15	.031-->.090	A-8 to A-9
0	-15	54	12-20	.030-->.108	A-9 to A-10
0	-15	62	5-15	.030-->.109	A-10 to A-12
-----	-----	-----	-----	-----	-----
0	-10	20	35	.0183	A-12
0	-10	21	12-22,32	.018-->.070	A-12 to A-14
0	-10	45	15,16	.031,.070	A-14
0	-10	62	16-24	.029-->.108	A-15 to A-16
-----	-----	-----	-----	-----	-----
0	-5	62	25-30	.031-->.078	A-16 to A-17
-----	-----	-----	-----	-----	-----
0	-2	20	36	.0177	A-17
0	-2	44	24,25	.041, .069	A-17
0	-2	62	31-36	.031-->.078	A-18
-----	-----	-----	-----	-----	-----
0	0	33	17-23	.018-->.078	A-19 to A-20
0	0	36	34	.088	A-20
0	0	37	32	.086	A-20
0	0	39	34	.061	A-20
0	0	42	5-8	.030-->.051	A-20 to A-21

### Hover Performance Data Index ( Continued)

YAW deg	ALFS,U deg	RUN	PTS	CTH/S	DATA LOCATION
0	+5	43	27-31	.030-->.071	A-21 to A-22
0	+5	46	16-18	.031,.070,.102	A-22
-----	-----	-----	-----	-----	-----
0	+10	41	30-32	.100,.069,.019	A-22 to A-23
0	+10	43	24-26	.030-->.051	A-23
0	-----	-----	-----	-----	-----
0	+15	43	16-23	.031-->.099	A-23to A-24
0	+15	54	5-11	.029-->.090	A-25 to A-26
	-----	-----	-----	-----	-----
90	+15	52	6-15	.030-->.118	A-26 to A-27
90	+15	52	16-24	.035-->.115	A-27 to A-29



RUN POINT	V/OR VKTS ALFS,U	MTUN QPSF BARO RHO	MTIP RPM OMEG*R TTEMPF	THETA		LIFTH,C A1 DRAGH,C B1 SIDEH,C	PITCHH,S ROLLH,S TORQ,C HFORCE	CLRH/S CXRH/S CYRH/S	CLRHS/S CXRHS/S CYRHS/S	CMYHS/S CMXHS/S	THRUST		CTHS/ CP/S CPO/S FMERIT						
				CONING							POW HP								
43 9	0	0	0.604	4.1	3707		40	0.030001	0.031105	0.000015	3844	0.031105							
	0	0	292	0.3	-1015		-46	0.008216	0.000171	-0.000017	187971	0.002261							
	-15	14.8	672.7	0.1	19		6147	0.00015	0.00015		342	0.0012							
		0.002401	55.8	2.3			-21					0.4692							
43 10	0	0	0.605	5.4	4850		223	0.039098	0.040513	0.000082	5026	0.040513							
	0	0	292.5	0.4	-1317		-5	0.010614	0.000133	-0.000002	238277	0.00285							
	-15	14.806	673.9	0.1	22		7779	0.000178	0.000178		433	0.001273							
		0.002402	55.8	2.7			-16					0.5532							
43 11	0	0	0.606	6.6	6143		76	0.049446	0.051288	0.000028	6371	0.051288							
	0	0	292.7	0.4	-1693		-105	0.013626	0.000364	-0.000039	307009	0.003665							
	-15	14.807	674.3	0.3	23		10016	0.000181	0.000181		558	0.001419							
		0.002402	55.8	3.3			-45					0.6129							
43 12	0	0	0.606	8	7366		237	0.059165	0.06131	0.000087	7633	0.06131							
	0	0	293	0.5	-2001		-79	0.016074	0.000203	-0.000029	382651	0.004553							
	-15.01	14.809	675	0.2	39		12471	0.00031	0.00031		696	0.001617							
		0.002402	55.8	3.8			-25					0.6448							
43 13	0	0	0.605	9	8469		239	0.068373	0.07082	0.000088	8772	0.07082							
	0	0	292.3	0.5	-2286		10	0.018456	0.000131	0.000004	452846	0.005429							
	-15	14.804	673.4	0.1	45		14794	0.000362	0.000362		823	0.001784							
		0.002401	55.8	4.3			-16					0.6713							
43 14	0	0	0.606	10.1	9516		293	0.07668	0.079458	0.000107	9861	0.079458							
	0	0	292.5	0.7	-2585		-54	0.02083	0.000274	-0.000002	535762	0.006406							
	-15	14.809	673.9	0.1	60		17491	0.000483	0.000483		974	0.002075							
		0.002403	55.7	4.7			-34					0.6761							

RUN POINT	V/OR VKTS ALFS,U	MTUN QPSF BARO RHO	MTIP RPM OMEG*R TTEMPF	THETA		LIFTH,C DRAGH,C SIDEH,C	PITCHH,S		CLRH/S CXRH/S CYRH/S	CLRHS/S CXRHS/S CYRHS/S	CMYHS/S CMXHS/S	THRUST		CTH/S CP/S CPO/S FMERIT					
				A1	B1		TORQ,C HFORCE					POW HP							
43	0	0	0.607	11.3		10774	7		0.086383	0.089598	0.000003	11175		0.089598					
15	0	0	293.3	0.7		-2968	7		0.023793	0.000624	0.000002	634214		0.007525					
	-15	14.802	675.7	0.5		78	20649		0.000623	0.000623		1153		0.002338					
		0.002402	55.7	5.2			-78							0.6892					
54	0.004	0.003	0.605	4		3549	-183		0.028688	0.029637	-0.000067	3667		0.029637					
12	1.7	0.01	293.2	0.1		-921	-390		0.007444	-0.000234	-0.000143	183634		0.002197					
	-15	14.777	675.5	0		44	5981		0.000356	0.000356		334		0.001211					
		0.002384	58.3	2.1			29							0.449					
54	0	0	0.603	5.2		4659	-152		0.037939	0.039221	-0.000056	4817		0.039221					
13	0	0	292.1	0.1		-1222	-469		0.009948	-0.00021	-0.000174	234056		0.002832					
	-15	14.777	673	0		45	7652		0.000367	0.000367		426		0.00133					
		0.002384	58.2	2.6			26							0.5304					
54	0	0	0.606	6.6		6031	-70		0.048633	0.050263	-0.000026	6233		0.050263					
14	0	0	293.5	0.2		-1575	-387		0.012702	-0.000318	-0.000142	303360		0.003618					
	-15	14.777	676.2	0.1		48	9870		0.000384	0.000384		552		0.001438					
		0.002385	58.1	3.2			39							0.6024					
54	0	0	0.605	7.6		6910	-2		0.055945	0.057836	-0.000001	7143		0.057836					
15	0	0	292.9	0.2		-1812	-324		0.014672	-0.000307	-0.000119	358847		0.004306					
	-15	14.777	674.8	0.1		56	11699		0.000454	0.000454		652		0.001616					
		0.002385	58.1	3.6			38							0.6247					
54	0	0	0.603	8.9		8194	-338		0.066728	0.069125	-0.000125	8489		0.069125					
16	0	0	292	0.2		-2216	-435		0.018046	0.00016	-0.000161	442030		0.005351					
	-15	14.777	672.7	0.3		63	14456		0.000512	0.000512		804		0.001836					
		0.002386	57.9	4.2			-20							0.6568					

RUN POINT	V/OR VKTS ALFS,U	MTUN QPSF BARO RHO	MTIP RPM OMEG*R TTEMPF	THETA A1 B1 CONING	LIFTH,C DRAGH,C SIDEH,C	PITCH,H,S ROLLH,S TORQ,C HFORCE	CLRH/S CXRH/S CYRH/S	CLRHS/S CXRHS/S CYRHS/S	CMYHS/S CMXHS/S	THRUST POW HP	CTH/S CP/S CPO/S FMERIT
54	0	0	0.607	10.2	9576	-138	0.076991	0.079657	-0.00005	9907	0.079657
17	0	0	293.8	0.6	-2542	-232	0.020436	-0.000187	-0.000085	548455	0.006515
	-15	14.777	676.9	0.1	120	17826	0.000967	0.000967		997	0.002167
		0.002387	57.7	4.6		23					0.6673
54	0	0	0.607	11	10483	9	0.084394	0.087317	0.000003	10846	0.087317
18	0	0	293.6	0.6	-2782	-299	0.022401	-0.000205	-0.000109	619854	0.007378
	-15	14.778	676.4	0.1	100	20161	0.000803	0.000803		1127	0.002388
		0.002387	57.7	5.1		25					0.6763
54	0	0	0.608	12.4	11863	-44	0.094944	0.098193	-0.000016	12268	0.098193
19	0	0	294.4	0.9	-3130	-17	0.02505	-0.000377	-0.000006	739569	0.008727
	-15	14.778	678.2	0.2	174	23989	0.00139	0.00139		1345	0.002777
		0.002388	57.5	5.6		47					0.6818
54	0	0	0.604	13.5	12890	39	0.104572	0.108116	0.000014	13326	0.108116
20	0	0	292.4	0.9	-3385	-41	0.027463	-0.000538	-0.000015	836250	0.010071
	-15	14.779	673.6	0.3	152	27311	0.001234	0.001234		1520	0.003196
		0.002388	57.5	6.1		66					0.6826
62	0.004	0.003	0.605	4	3537	-2	0.028674	0.029674	-0.000001	3660	0.029674
5	1.7	0.01	293.6	-0.1	-942	-35	0.007638	-0.000044	-0.000013	184204	0.002208
	-15	14.79	676.4	0.1	-1	5991	-0.000011	-0.000011		335	0.001219
		0.00237	61.1	2.6		5					0.4477
62	0	0	0.606	5.3	4724	-7	0.03817	0.039509	-0.000003	4889	0.039509
6	0	0	294.1	0	-1262	-155	0.010199	-0.000028	-0.000057	237970	0.002838
	-15	14.79	677.6	-0.1	10	7727	0.000081	0.000081		433	0.001319
		0.00237	61.1	3		3					0.5351

RUN POINT	V/OR VKTS ALFS,U	MTUN QPSF BARO RHO	MTIP RPM OMEG* R	THETA A1 B1 CONING	LIFTH,C DRAGH,C SIDEH,C	PITCHH,S ROLLH,S TORQ,C HFORCE	CLRHS/S CXRHS/S CYRHS/S	CLRH/S CXRH/S CYRH/S	CLRHS/S CXRHS/S CYRHS/S	CMYHS/S CMXHS/S	THRUST POW HP	CTH/S CP/S CPO/S FMERIT
62	0	0	0.605	6.6	5913	161	0.047843	0.049523	0.000059		6121	0.049523
7	0	0	293.9	0.5	-1581	-56	0.012791	-0.000028	-0.000021		301658	0.003605
	-15	14.79	677.1	0	34	9801	0.000276	0.000276			548	0.001473
		0.00237	61.1	3.7		3						0.5912
62	0	0	0.611	7.7	6924	63	0.05501	0.056972	0.000023		7171	0.056972
8	0	0	296.6	0.5	-1866	111	0.014826	0.000083	0.00004		368507	0.004285
	-15	14.789	683.3	0.1	61	11864	0.000482	0.000482			670	0.001655
		0.00237	61.1	4		-10						0.6138
62	0	0	0.605	9.1	8415	152	0.068089	0.070525	0.000056		8716	0.070525
9	0	0	293.9	0.7	-2271	-50	0.018377	0.000128	-0.000019		462912	0.005532
	-15	14.79	677.1	0.1	61	15041	0.000491	0.000491			842	0.001909
		0.00237	61.1	4.6		-16						0.6548
62	0	0	0.606	10.1	9249	203	0.07453	0.07719	0.000074		9579	0.07719
10	0	0	294.5	0.7	-2493	-137	0.020088	0.000114	-0.00005		535409	0.006359
	-15	14.789	678.5	0.1	63	17361	0.000505	0.000505			973	0.002212
		0.00237	61.1	5.1		-14						0.6522
62	0	0	0.605	11.2	10372	-91	0.08409	0.087186	-0.000034		10754	0.087186
11	0	0	293.6	0.9	-2841	31	0.023033	0.000484	0.000012		621477	0.007449
	-15	14.79	676.4	0.3	106	20213	0.000858	0.000858			1130	0.00247
		0.00237	61.1	5.5		-60						0.6684
62	0	0	0.607	12	11499	0	0.092605	0.095925	0		11911	0.095925
12	0	0	294.6	0.8	-3107	57	0.02502	0.0002	0.000021		706024	0.008377
	-15	14.791	678.7	0.2	91	22885	0.000733	0.000733			1284	0.002632
		0.00237	61.2	5.9		-25						0.6858

RUN POINT	V/OR VKTS ALFS,U	MTUN QPSF BARO RHO	MTIP RPM OMEG*R TTEMPF	THETA		LIFTH,C DRAGH,C SIDEH,C	PITCHH,S ROLLH,S TORQ,C HFORCE	CLRH/S CXRH/S CYRH/S	CLRHS/S CXRHS/S CYRHS/S	CMYHS/S CMXHS/S	THRUST POW HP	CTHS/ CPS/ CPO/S FMERIT
				CONING								
				A1	B1							
62 13	0	0	0.605	13.6	12767	180		0.103472	0.107165	0.000066	13223	0.107165
	0	0	293.7	0.9	-3441	-11		0.02789	0.000159	-0.000004	841757	0.010082
	-15	14.791	676.6	0.4	93	27369		0.000756	0.000756		1530	0.003298
		0.002369	61.3	6.4		-20						0.6729
62 14	0	0	0.605	13.6	13037	-20		0.10559	0.109403	-0.000008	13507	0.109403
	0	0	293.7	0.9	-3535	222		0.028634	0.00033	0.000082	851296	0.01019
	-15	14.794	676.6	0.5	136	27679		0.001099	0.001099		1548	0.003192
		0.002371	61.1	6.4		-41						0.6867
62 15	0	0	0.605	10.5	9661	231		0.07815	0.081048	0.000085	10020	0.081048
	0	0	293.9	0.9	-2656	-53		0.021485	0.000526	-0.00002	556389	0.006647
	-15	14.793	677.1	0.4	70	18078		0.000563	0.000563		1012	0.002185
		0.002371	61.1	5.2		-65						0.6713
20 35	0.004	0.003	0.61	2.2	2252	-143		0.017928	0.018186	-0.000052	2284	0.018186
	1.7	0.01	292.9	-0.1	-383	-211		0.003049	-0.000104	-0.000076	131209	0.001548
	-9.98	14.786	674.8	0.1	-14	4278		-0.000108	-0.000108		239	0.001074
		0.002425	50.1	1.6		13						0.3063
21 12	0	0	0.606	2.2	2242	-4		0.018089	0.018354	-0.000001	2275	0.018354
	0	0	291.7	-0.1	-385	-178		0.003107	-0.000084	-0.000065	127933	0.001536
	-10.01	14.78	672	0.1	-7	4188		-0.000059	-0.000059		233	0.001055
		0.002413	52.3	1.6		10						0.3131
21 13	0	0	0.607	3.8	3636	90		0.029194	0.029615	0.000033	3688	0.029615
	0	0	292.4	0	-620	-55		0.004975	-0.000175	-0.00002	174874	0.002084
	-10.01	14.779	673.6	-0.2	8	5711		0.000066	0.000066		318	0.001099
		0.002413	52.3	2.2		22						0.4728

RUN POINT	V/OR VKTS ALFS,U	MTUN QPSF BARO RHO	MTP RPM OMEG*R TTEMPF	THETA		LIFTH,C DRAGH,C SIDEH,C	PITCHH,S		CLRH/S CXRH/S CYRH/S	CLRHS/S CXRHS/S CYRHS/S	CMYHS/S CMXHS/S	THRUST		C/H/S CP/S CPO/S FMERIT					
				A1	B1		TORQ,C	HFORCE				POW	HP						
21	0	0	0.604	5.1		4697	32		0.038073	0.038663	0.000012	4770		0.038663					
14	0	0	290.9	0.6		-830	167		0.006727	0.000006	0.000062	222312		0.002689					
	-10.01	14.779	670.2	0		35	7298		0.000287	0.000287		404		0.001219					
		0.002415	51.9	2.7			-1							0.5468					
21	0	0	0.607	6.4		6034	-130		0.048504	0.049324	-0.000048	6136		0.049324					
15	0	0	292	0.5		-1115	-124		0.008965	0.000397	-0.000045	291335		0.003481					
	-10.01	14.779	672.7	0.4		10	9528		0.000081	0.000081		530		0.001363					
		0.002417	51.5	3.2			-49							0.6086					
21	0	0	0.604	7.6		7133	62		0.05792	0.058867	0.000023	7250		0.058867					
16	0	0	290.6	0.5		-1296	110		0.010523	0.000295	0.000041	352780		0.004278					
	-10.01	14.778	669.5	0.3		27	11593		0.000215	0.000215		641		0.001516					
		0.002416	51.7	3.7			-36							0.6456					
21	0	0	0.605	9		8515	68		0.068866	0.07002	0.000025	8658		0.07002					
17	0	0	291.1	0.5		-1567	50		0.012671	0.000508	0.000018	442730		0.005339					
	-10.01	14.779	670.6	0.5		24	14523		0.00019	0.00019		805		0.001756					
		0.002417	51.5	4.4			-63							0.6711					
21	0	0	0.605	7.7		7272	-49		0.058885	0.05986	-0.000018	7392		0.05986					
18	0	0	291	0.6		-1330	14		0.010768	0.000369	0.000005	359209		0.004339					
	-10.01	14.777	670.4	0.3		43	11788		0.000351	0.000351		653		0.001506					
		0.002416	51.7	3.8			-46							0.6528					
21	0	0	0.605	6.5		6102	185		0.049446	0.050259	0.000068	6202		0.050259					
19	0	0	290.9	0.6		-1112	223		0.009008	0.000276	0.000082	293400		0.003548					
	-10.01	14.777	670.2	0.3		21	9631		0.000167	0.000167		533		0.001369					
		0.002416	51.7	3.2			-34							0.6142					

RUN POINT	V/OR VKTS ALFS,U	MTUN QPSF BARO RHO	MTIP RPM OMEG*R TTEMPF	THETA		LIFTH,C DRAGH,C SIDEH,C	PITCHH,S ROLLH,S TORQ,C HFORCE	CLRH/S CXRH/S CYRH/S	CLRHS/S CXRHS/S CYRHS/S	CMYHS/S CMXHS/S	THRUST		CTH/S CP/S CPO/S FMERIT
				CONING							POW	HP	
				A1	B1								
21	0	0	0.605	5.3	4868	58		0.03945	0.040105	0.000021	4949	0.040105	
20	0	0	290.9	0.5	-891	98		0.00722	0.000252	0.000036	228185	0.002759	
	-10.01	14.777	670.2	0.2	12	7491		0.0001	0.0001		415	0.001206	
		0.002416	51.7	2.8		-31						0.5629	
21	0	0	0.605	3.9	3653	148		0.029586	0.030052	0.000055	3710	0.030052	
21	0	0	290.9	0	-651	124		0.005273	0.00005	0.000046	174606	0.00211	
	-10.01	14.777	670.2	0	-10	5732		-0.000084	-0.000084		317	0.001103	
		0.002417	51.5	2.2		-6						0.4774	
21	0	0	0.606	2.7	2604	200		0.021004	0.021333	0.000073	2645	0.021333	
22	0	0	291.6	0	-463	295		0.003734	0.000027	0.000108	139445	0.001674	
	-10.01	14.777	671.8	0	-10	4567		-0.000079	-0.000079		254	0.001072	
		0.002415	51.8	1.7		-3						0.3599	
21	0	0	0.605	2.3	2276	-32		0.01844	0.018718	-0.000012	2310	0.018718	
32	0	0	290.9	-0.3	-396	-238		0.003212	-0.000042	-0.000088	129220	0.001562	
	-10.01	14.774	670.2	0.1	-20	4242		-0.000161	-0.000161		235	0.001067	
		0.002416	51.5	1.6		5						0.317	
45	0	0	0.605	4.1	3745	-356		0.03033	0.030796	-0.000131	3803	0.030796	
15	0	0	292.9	-0.2	-659	-570		0.00534	-0.000008	-0.00021	185890	0.002231	
	-10	14.773	674.8	0.2	-1	6061		-0.000011	-0.000011		338	0.001186	
		0.002384	58.1	2.3		1						0.4685	
45	0	0	0.606	9	8532	-27		0.068818	0.069862	-0.00001	8661	0.069862	
16	0	0	293.5	0.4	-1491	-233		0.012029	-0.000104	-0.000086	444561	0.005303	
	-10	14.773	676.2	0.2	46	14464		0.000369	0.000369		808	0.001732	
		0.002384	58.2	4.2		13						0.6733	

RUN POINT	V/OR VKTS ALFS,U	MTUN QPSF BARO RHO	MTIP RPM OMEG*R TTEMPF	THETA		LIFTH,C A1 DRAGH,C B1 SIDEH,C	PITCHH,S		CLRH/S CXRH/S CYRH/S	CLRHS/S CXRHS/S CYRHS/S	CMYHS/S CMXHS/S	THRUST		CTH/S CP/S CPO/S FMERIT					
				CONING								POW HP							
				TORQ,C															
				HFORCE															
62	0	0	0.604	4.1	3465		309		0.028139	0.028619	0.000114	3524		0.028619					
16	0	0	293.3	0.2	-643		-187		0.005222	0.000257	-0.000069	178302		0.002143					
	-10	14.795	675.7	0	-4		5805		-0.000029	-0.000029		324		0.001207					
		0.002371	61.1	2.6			-32							0.4369					
62	0	0	0.605	5.2	4692		205		0.037949	0.038579	0.000075	4770		0.038579					
17	0	0	293.9	0.4	-859		-62		0.006946	0.00025	-0.000023	231422		0.002765					
	-10	14.795	677.1	0	11		7519		0.000087	0.000087		421		0.001299					
		0.002371	61.1	3.1			-31							0.5301					
62	0	0	0.605	6.6	5990		302		0.048478	0.049259	0.000111	6086		0.049259					
18	0	0	293.8	0.5	-1080		133		0.00874	0.000189	0.000049	297849		0.003561					
	-10	14.796	676.9	0	36		9681		0.000293	0.000293		542		0.001447					
		0.002371	61.1	3.6			-23							0.5936					
62	0	0	0.606	7.9	7218		312		0.05832	0.059255	0.000115	7333		0.059255					
19	0	0	294	0.5	-1298		36		0.010489	0.000203	0.000013	374297		0.004465					
	-10	14.797	677.3	0	40		12157		0.000325	0.000325		681		0.001676					
		0.002372	61	4.2			-25							0.6247					
62	0	0	0.604	8.9	8338		334		0.067637	0.068747	0.000123	8475		0.068747					
20	0	0	293.4	0.5	-1517		-186		0.012305	0.000373	-0.000069	444059		0.005329					
	-10	14.796	675.9	0.1	16		14453		0.000126	0.000126		807		0.001843					
		0.002372	60.9	4.5			-46							0.6541					
62	0	0	0.605	10.2	9676		280		0.078388	0.07965	0.000103	9832		0.07965					
21	0	0	293.6	0.5	-1744		-209		0.014125	0.000299	-0.000077	540639		0.006475					
	-10	14.795	676.4	0.1	15		17584		0.00012	0.00012		983		0.002128					
		0.002372	60.9	5			-37							0.6714					



RUN POINT	V/OR VKTS ALFS,U	MTUN QPSF BARO RHO	MTIP RPM OMEG*R TTEMPF	THETA		LIFTH,C A1 DRAGH,C B1 SIDEH,C CONING	PITCHH,S ROLLH,S TORQ,C HFORCE	CLRH/S CXRH/S CYRH/S	CLRHS/S CXRHS/S CYRHS/S	CMYHS/S CMXHS/S	THRUST		CTH/S CPS CPO/S FMERIT			
				11.1	10640						364	0.086057		0.087431	0.000134	10810
62	0	0	0.605	11.1	10640	364		0.086057	0.087431	0.000134	10810	0.087431				
22	0	0	293.9	0.6	-1909	-444		0.015438	0.00026	-0.000163	618254	0.007385				
	-10	14.795	677.1	0.1	-15	20088		-0.000118	-0.000118		1124	0.002385				
		0.002371	61.1	5.5		-32						0.677				
62	0	0	0.606	12.4	11941	-19		0.096467	0.098079	-0.000007	12140	0.098079				
23	0	0	294	0.8	-2194	-105		0.017726	0.000705	-0.000038	736213	0.008781				
	-10	14.795	677.3	0.5	56	23913		0.00045	0.00045		1339	0.002841				
		0.002372	60.9	5.9		-87						0.6764				
62	0	0	0.606	13.7	13180	-99		0.10627	0.108074	-0.000036	13404	0.108074				
24	0	0	294.3	0.7	-2441	-135		0.019683	0.000931	-0.00005	853251	0.010147				
	-10	14.794	678	0.6	68	27686		0.000552	0.000552		1551	0.003276				
		0.002372	60.9	6.5		-115						0.6771				
62	0	0	0.605	4.2	3850	-122		0.031148	0.031299	-0.000045	3869	0.031299				
25	0	0	293.9	-0.8	-382	-852		0.003092	0.000365	-0.000313	185234	0.002213				
	-5	14.793	677.1	0.2	-63	6019		-0.000514	-0.000514		337	0.001142				
		0.002371	61.1	1.8		-45						0.4838				
62	0	0	0.605	5.3	4852	-123		0.039248	0.039443	-0.000045	4876	0.039443				
26	0	0	293.9	-0.8	-488	-1036		0.003947	0.000511	-0.000381	232303	0.002775				
	-5	14.793	677.1	0.2	-87	7548		-0.000702	-0.000702		422	0.00126				
		0.002371	61.1	3		-63						0.5458				
62	0	0	0.605	6.5	5991	97		0.048459	0.048675	0.000036	6018	0.048675				
27	0	0	293.9	0.3	-568	-119		0.004595	0.000354	-0.000044	287780	0.003438				
	-5	14.792	677.1	0.2	-3	9350		-0.000021	-0.000021		523	0.001361				
		0.002371	61	3.5		-44						0.6041				

RUN POINT	V/OR VKTS ALFS,U	MTUN QPSF BARO RHO	MTIP RPM OMEG*R TTEMPF	THETA		LIFTH,C DRAGH,C SIDEH,C	PITCHH,S		CLRH/S CXRH/S CYRH/S	CLRHS/S CXRHS/S CYRHS/S	CMYHS/S CMXHS/S	THRUST		CTHS/ CP/S CPO/S FMERIT
				A1	B1		TORQ,C	HFORCE				POW	HP	
62	0	0	0.604	7.9	7550	-258	0.061238	0.061521	-0.000095	7585	0.061521			
28	0	0	293.5	0	-730	-331	0.005924	0.000564	-0.000122	371208	0.004453			
	-5	14.791	676.2	0.2	-15	12078	-0.000123	-0.000123		675	0.001502			
		0.002371	61	3.4		-70					0.6627			
62	0	0	0.606	8.8	8442	-239	0.068042	0.068366	-0.000087	8482	0.068366			
29	0	0	294.4	-0.2	-830	-712	0.006689	0.000734	-0.000261	432986	0.005145			
	-5	14.79	678.2	0.2	-59	14045	-0.000475	-0.000475		787	0.001688			
		0.002371	60.9	3.3		-91					0.6718			
62	0	0	0.604	9.9	9608	-334	0.077941	0.078318	-0.000123	9655	0.078318			
30	0	0	293.5	0.2	-953	-267	0.007729	0.000907	-0.000099	516660	0.006198			
	-5	14.791	676.2	0.5	-3	16810	-0.000023	-0.000023		939	0.00196			
		0.002371	61.1	3.4		-112					0.6838			
20	0	0	0.61	2.2	2228	-352	0.017741	0.017751	-0.000128	2230	0.017751			
36	0	0	292.9	0.4	-76	106	0.000604	-0.000015	0.000038	128436	0.001515			
	-2	14.787	674.8	0.2	-2	4187	-0.000016	-0.000016		234	0.001058			
		0.002425	50.1	1.6		2					0.3018			
44	0	0	0.605	5.5	5049	53	0.040858	0.040887	0.000019	5053	0.040887			
24	0	0	293.9	0.1	-190	163	0.001538	0.000111	0.00006	245034	0.002928			
	-2	14.767	677.1	0.1	-9	7962	-0.000077	-0.000077		446	0.001329			
		0.00237	60.9	2.7		-14					0.546			
44	0	0	0.606	9	8538	251	0.069027	0.069065	0.000092	8542	0.069065			
25	0	0	294	0.3	-285	264	0.002303	-0.000108	0.000097	455082	0.005432			
	-2	14.768	677.3	0	23	14781	0.000186	0.000186		827	0.001922			
		0.00237	60.9	4		13					0.6462			

RUN POINT	V/OR VKTS ALFS,U	MTUN QPSF BARO	MTP RPM OMEG*R TTEMPF	THETA		LIFTH,C DRAGH,C SIDEH,C	PITCHH,S ROLLH,S TORQ,C HFORCE	CLRH/S CXRH/S CYRH/S	CLRHS/S CXRHS/S CYRHS/S	CMYHS/S CMXHS/S	THRUST POW HP	CTH/S CP/S CPO/S FMERIT
				A1	B1							
62	0	0	0.606	4.2	3803	-629		0.03072	0.030755	-0.000231	3807	0.030755
31	0	0	294.1	-1	-192	-718		0.001547	0.000474	-0.000264	184954	0.002205
	-2	14.793	677.6	0.5	-54	6005		-0.000439	-0.000439		336	0.001162
		0.002371	61.1	1.6		-59						0.473
62	0	0	0.606	5.3	4953	-560		0.039986	0.040032	-0.000205	4959	0.040032
32	0	0	294.2	-1	-252	-940		0.002032	0.000635	-0.000345	235478	0.002805
	-2	14.794	677.8	0.5	-83	7643		-0.000674	-0.000674		428	0.001256
		0.002371	61.1	2.3		-79						0.5523
62	0	0	0.605	6.6	6347	-548		0.051334	0.051389	-0.000202	6354	0.051389
33	0	0	293.9	-1	-308	-832		0.002491	0.000698	-0.000306	300924	0.003594
	-2	14.796	677.1	0.5	-90	9778		-0.000724	-0.000724		547	0.001342
		0.002371	61.1	2.6		-86						0.6267
62	0	0	0.608	7.6	7115	-773		0.057078	0.057144	-0.000282	7123	0.057144
34	0	0	295.1	-0.9	-360	-1059		0.002891	0.000898	-0.000386	353606	0.004172
	-2	14.796	679.9	0.4	-98	11443		-0.000785	-0.000785		643	0.001531
		0.002371	61.1	2.9		-112						0.6331
62	0	0	0.605	8.9	8532	-308		0.068947	0.06901	-0.000113	8539	0.06901
35	0	0	294	0	-372	-354		0.003004	0.000596	-0.00013	441142	0.005263
	-2	14.797	677.3	0.3	-14	14329		-0.000111	-0.000111		802	0.001757
		0.002371	61.1	4.6		-74						0.6661
62	0	0	0.607	10	9736	-219		0.078251	0.078325	-0.00008	9745	0.078325
36	0	0	294.8	0	-433	-628		0.003484	0.000751	-0.000229	528550	0.006255
	-2	14.797	679.2	0.3	-49	17121		-0.000391	-0.000391		961	0.002016
		0.002371	61.1	4.3		-93						0.6777

RUN POINT	V/OR VKTS ALFS,U	MTUN QPSF BARO RHO	MTP		THETA		LIFTH,C		PITCHH,S	CLRH/S		CLRHS/S		CMYHS/S		THRUST		CTH/S		
			RPM	OMEG*R	CONING	A1	DRAGH,C	SIDEH,C		CXRH/S	CYRH/S	CXRHS/S	CYRHS/S	CMXHS/S	HP	POW	CP/S	CPO/S	FMERIT	
33	0	0	0.604		2.2	2215			229	0.018168		0.018181		0.000085		2216	0.018181			
17	0	0	291.6		0.1	-83			112	0.000679		0.000045		0.000042		124764	0.001524			
	-2	14.653	671.8		-0.3	-11			4086	-0.000094		-0.000094			227		0.001049			
		0.002375	55.7		1.6				-5								0.3112			
33	0	0	0.607		4	3712			46	0.030167		0.030188		0.000017		3715	0.030188			
18	0	0	293.1		0	-138			-2	0.001124		0.000071		-0.000001		176440	0.002124			
	-2	14.652	675.3		-0.2	-4			5748	-0.000032		-0.000032			321		0.001109			
		0.002373	56.1		2.3				-9								0.4777			
33	0	0	0.607		5.2	4868			8	0.039456		0.039488		0.000003		4871	0.039488			
19	0	0	293.5		0.3	-196			-95	0.001592		0.000214		-0.000035		228636	0.002741			
	-2	14.652	676.2		0	5			7439	0.000043		0.000043			416		0.001223			
		0.002372	56.2		2.7				-26								0.5536			
33	0	0	0.607		6.6	6213			194	0.050465		0.050501		0.000072		6218	0.050501			
20	0	0	293.1		0.7	-234			173	0.001901		0.000138		0.000064		295025	0.003549			
	-2	14.651	675.3		0.1	38			9612	0.000305		0.000305			536		0.001354			
		0.002374	55.8		3.4				-17								0.6185			
33	0	0	0.603		7.7	7334			-34	0.060249		0.060292		-0.000013		7339	0.060292			
21	0	0	291.4		0.6	-281			111	0.002308		0.000204		0.000041		355167	0.004346			
	-2	14.651	671.3		0	46			11639	0.000382		0.000382			646		0.001483			
		0.002375	55.7		3.8				-25								0.6587			
33	0	0	0.605		9.1	8694			-29	0.071108		0.071167		-0.000011		8702	0.071167			
22	0	0	292		0.7	-361			233	0.002951		0.000468		0.000086		444161	0.0054			
	-2	14.65	672.7		0.4	51			14525	0.000414		0.000414			808		0.001728			
		0.002375	55.5		4.3				-57								0.6799			

RUN POINT	V/OR VKTS ALFS,U	MTUN QPSF BARO RHO	MTIP RPM OMEG*R TTEMPF	THETA A1 B1 CONING	LIFTH,C DRAGH,C SIDEH,C	PITCHH,S ROLLH,S TORQ,C HFORCE	CLRH/S CXRH/S CYRH/S	CLRHS/S CXRHS/S CYRHS/S	CMYHS/S CMXHS/S	THRUST POW HP	CTH/S CP/S CPO/S FMERIT
33	0	0	0.607	9.9	9620	-274	0.078106	0.078166	-0.000101	9627	0.078166
23	0	0	293	0.7	-377	128	0.003064	0.000337	0.000047	507450	0.006104
	-2	14.65	675	0.2	85	16539	0.000692	0.000692		923	0.001877
		0.002376	55.3	4.6		-41					0.6924
36	0	0	0.605	11.1	10829	-143	0.088278	0.088278	-0.000053	10829	0.088278
34	0	0	293.7	0.7	-16	292	0.000128	0.000143	0.000108	615810	0.007419
	0.01	14.7	676.6	0.3	102	20022	0.000828	0.000828		1120	0.002347
		0.002356	61.4	5.1		-18					0.6837
37	0	0	0.605	10.7	10538	118	0.085743	0.085743	0.000044	10538	0.085743
32	0	0	292.9	0	30	-64	-0.000247	-0.000247	-0.000024	558813	0.006738
	0	14.709	674.8	-0.3	-18	18219	-0.000147	-0.000147		1016	0.001882
		0.002373	57.8	5		30					0.7206
39	0	0	0.606	8.1	7569	80	0.061104	0.061104	0.000029	7569	0.061104
34	0	0	292.6	0.3	9	-122	-0.000076	-0.000076	-0.000045	377670	0.004523
	0	14.76	674.1	-0.1	20	12326	0.00016	0.00016		687	0.001602
		0.002397	54.8	3.9		9					0.6458
42	0	0	0.603	4.1	3748	-135	0.030505	0.030505	-0.00005	3748	0.030505
5	0	0	290.9	-0.1	16	-156	-0.000129	-0.000129	-0.000058	181634	0.002206
	0	14.771	670.2	0	-6	5962	-0.000051	-0.000051		330	0.001176
		0.002405	53.8	2.2		16					0.467
42	0	0	0.606	6.7	6331	-424	0.051005	0.051005	-0.000155	6331	0.051005
6	0	0	292.4	0.5	-20	65	0.000163	0.000163	0.000024	301930	0.003611
	0	14.77	673.6	0.1	57	9861	0.000457	0.000457		549	0.001383
		0.002405	53.8	3.3		-20					0.6169

RUN POINT	V/OR VKTS	MTUN QPSF	MTP RPM	THETA		LIFTH,C DRAGH,C	PITCHH,S ROLLH,S	CLRH/S CXRH/S	CLRHS/S CXRHS/S	CMYHS/S CMXHS/S	THRUST POW	CTH/S CP/S
				A1	B1							
	ALFS,U	BARO	OMEG*R	CONING	SIDEH,C	TORQ,C	HFORCE	CYRH/S	CYRHS/S		HP	CPO/S FMERIT
		RHO	TTEMPF									
42	0	0	0.606	4.2	3841	-250		0.031008	0.031008	-0.000092	3841	0.031008
7	0	0	292.1	0.3	5	82		-0.000042	-0.000042	0.00003	183248	0.002199
	0	14.77	673	0	27	5991		0.000218	0.000218		333	0.001143
		0.002405	53.8	2.3		5						0.4803
42	0	0	0.605	6.7	6323	-27		0.051243	0.051243	-0.00001	6323	0.051243
8	0	0	291.6	0.2	3	154		-0.000021	-0.000021	0.000057	291211	0.003513
	0	14.769	671.8	0.1	26	9537		0.000211	0.000211		529	0.001269
		0.002404	53.9	3.3		3						0.6386
43	0	0	0.606	4	3768	41		0.030319	0.030437	0.000015	3783	0.030437
27	0	0	292.9	-0.4	333	-3		-0.002676	-0.000023	-0.000001	182003	0.00217
	5	14.8	674.8	-0.1	-15	5934		-0.000123	-0.000123		331	0.001143
		0.0024	56.1	2.2		3						0.4732
43	0	0	0.606	5.2	4917	-53		0.039617	0.039771	-0.00002	4936	0.039771
28	0	0	292.7	-0.4	434	-19		-0.003498	-0.000032	-0.000007	231136	0.002762
	5	14.8	674.3	0	-19	7541		-0.000152	-0.000152		420	0.001228
		0.0024	56.1	2.7		4						0.5554
43	0	0	0.606	6.4	6068	145		0.048916	0.049137	0.000053	6096	0.049137
29	0	0	292.6	-0.2	580	48		-0.004676	-0.000395	0.000018	287852	0.003442
	5	14.8	674.1	-0.5	9	9394		0.000071	0.000071		523	0.001336
		0.0024	56	3.2		49						0.612
43	0	0	0.606	7.7	7508	20		0.060428	0.06067	0.000007	7538	0.06067
30	0	0	292.8	-0.4	672	-70		-0.00541	-0.000123	-0.000026	361646	0.004315
	5	14.8	674.6	-0.1	-31	11795		-0.000249	-0.000249		658	0.001425
		0.002401	55.9	3.8		15						0.6698

RUN POINT	V/OR VKTS ALFS,U	MTUN QPSF BARO RHO	MTIP RPM OMEG*R TTEMPF	THETA A1 B1 CONING	LIFTH,C DRAGH,C SIDEH,C	PITCHH,S ROLLH,S TORQ,C HFORCE	CLRH/S CXRH/S CYRH/S	CLRHS/S CXRHS/S CYRHS/S	CMYHS/S CMXHS/S	THRUST POW HP	CTH/S CP/S CPO/S FMERIT
43	0	0	0.605	9	8761	-217	0.070669	0.070933	-0.000079	8794	0.070933
31	0	0	292.4	-0.4	759	-143	-0.006126	0.000057	-0.000052	437060	0.005233
	5	14.8	673.6	0.1	-28	14274	-0.000225	-0.000225		795	0.00158
		0.002402	55.7	4.4		-7					0.6981
46	0	0	0.606	4.1	3778	-47	0.030403	0.030505	-0.000017	3791	0.030505
16	0	0	292.6	-0.2	310	-4	-0.002498	0.000161	-0.000001	185817	0.002218
	5	14.787	674.1	0.2	-30	6064	-0.000238	-0.000238		338	0.001188
		0.002404	54.7	2.2		-20					0.4645
46	0	0	0.604	8.9	8647	174	0.070092	0.070371	0.000064	8681	0.070371
17	0	0	291.4	-0.1	772	-18	-0.006258	-0.000126	-0.000007	438491	0.005295
	5	14.788	671.3	0	-31	14370	-0.000254	-0.000254		797	0.001685
		0.002406	54.3	4.2		15					0.6818
46	0	0	0.605	12.6	12508	-22	0.101167	0.101581	-0.000008	12559	0.101581
18	0	0	291.7	0.2	1132	355	-0.009158	-0.000306	0.00013	738735	0.008891
	5	14.787	672	0.2	48	24184	0.000386	0.000386		1343	0.00263
		0.002407	54.2	5.8		38					0.7042
41	0	0	0.603	12.5	12096	-447	0.098491	0.100003	-0.000165	12281	0.100003
30	0	0	291.2	-0.3	2128	-143	-0.017324	0.000042	-0.000053	722457	0.008769
	10	14.766	670.9	0.9	-69	23691	-0.000559	-0.000559		1314	0.002653
		0.002399	54.7	5.7		-5					0.6974
41	0	0	0.603	8.9	8318	-89	0.06771	0.068766	-0.000033	8448	0.068766
31	0	0	291.2	0.1	1475	-115	-0.012006	-0.000066	-0.000042	432990	0.005254
	10	14.766	670.9	0.2	-18	14199	-0.000144	-0.000144		787	0.001766
		0.0024	54.6	4.2		8					0.6638

RUN POINT	V/OR VKTS	MTUN QPSF	MTIP RPM	THETA A1	LIFTH,C DRAGH,C	PITCHH,S ROLLH,S	CLRH/S CXRH/S	CLRHS/S CXRHS/S	CMYHS/S CMXHS/S	THRUST POW	CTH/S CP/S
	ALFS,U	BARO	OMEG*R	B1	SIDEH,C	TORQ,C	CYRH/S	CYRHS/S		HP	CPO/S
		RHO	TTEMPF	CONING		HFORCE					FMERIT
41	0	0	0.604	2.3	2291	-328	0.018642	0.01893	-0.000121	2326	0.01893
32	0	0	291.3	0.2	404	359	-0.003288	-0.000001	0.000133	129527	0.00157
	10	14.766	671.1	0.3	0	4246	-0.000003	-0.000003		236	0.001067
		0.002399	54.7	1.7		0					0.3207
43	0	0	0.606	3.9	3619	11	0.029165	0.029621	0.000004	3676	0.029621
24	0	0	292.8	-0.4	643	94	-0.005182	-0.000039	0.000034	177924	0.002125
	10	14.801	674.6	-0.1	-5	5803	-0.000044	-0.000044		323	0.001139
		0.002398	56.5	2.2		5					0.4639
43	0	0	0.605	5.3	4929	-113	0.03987	0.040486	-0.000042	5005	0.040486
25	0	0	292.2	-0.3	870	122	-0.007038	-0.000008	0.000045	233698	0.002808
	10	14.799	673.2	-0.1	-8	7637	-0.000067	-0.000067		425	0.001233
		0.002398	56.3	2.8		1					0.561
43	0	0	0.604	6.6	6224	-99	0.050384	0.051159	-0.000037	6320	0.051159
26	0	0	292	-0.3	1095	130	-0.008868	0.000016	0.000048	298267	0.003589
	10	14.801	672.7	0	-13	9754	-0.000101	-0.000101		542	0.001351
		0.0024	56.1	3.3		-2					0.6234
43	0	0	0.605	4.1	3676	211	0.029672	0.030723	0.000078	3806	0.030723
16	0	0	292.3	-0.3	987	129	-0.00797	-0.000019	0.000047	182291	0.002185
	15	14.799	673.4	-0.3	-11	5955	-0.00009	-0.00009		331	0.001143
		0.002402	55.5	2.3		2					0.4766
43	0	0	0.605	5.3	4765	149	0.038437	0.039795	0.000055	4934	0.039795
17	0	0	292.4	-0.5	1278	65	-0.010311	-0.000011	0.000024	232470	0.002783
	15	14.799	673.6	-0.2	-35	7592	-0.000281	-0.000281		423	0.001248
		0.002402	55.5	2.8		1					0.5516



RUN POINT	V/OR VKTS ALFS,U	MTUN QPSF BARO RHO	MTP RPM OMEG*R TTEMPF	THETA		LIFTH,C A1 DRAGH,C B1 SIDEH,C CONING	PITCHH,S ROLLH,S TORQ,C HFORCE	CLRH/S CXRH/S CYRH/S	CLRHS/S CXRHS/S CYRHS/S	CMYHS/S CMXHS/S	THRUST		CTH/S CP/S CPO/S FMERIT
				POW	HP								
43 18	0 0 15	0 0 14.799 0.002401	0.605 292.3 673.4 55.7	6.7 -0.5 -0.2 3.4	6228 1671 -32	7 23 9903 2	0.050284 -0.013493 -0.000257	0.052063 -0.000019 -0.000257	0.000003 0.000008	6448 303129 551	0.052063 0.003634 0.001337 0.6321		
43 19	0 0 15	0 0 14.799 0.002399	0.606 292.8 674.6 56.1	7.7 -0.5 -0.2 3.8	7153 1928 -30	-54 44 11795 11	0.0576 -0.015523 -0.000238	0.059655 -0.000087 -0.000238	-0.00002 0.000016	7408 361646 658	0.059655 0.004317 0.001499 0.6526		
43 20	0 0 15	0 0 14.799 0.002399	0.606 293.1 675.3 56.3	9 -0.5 -0.2 4.2	8531 2291 -31	-168 27 14577 5	0.068583 -0.01842 -0.000252	0.071014 -0.000041 -0.000252	-0.000061 0.00001	8834 447424 813	0.071014 0.005327 0.001667 0.687		
43 21	0 0 15	0 0 14.81 0.002399	0.605 292.7 674.3 56.5	10.2 -0.6 -0.4 4.8	9703 2687 -12	14 263 17568 84	0.07819 -0.021656 -0.000098	0.081131 -0.00068 -0.000098	0.000005 0.000096	10068 538500 979	0.081131 0.006435 0.001966 0.6945		
43 22	0 0 15	0 0 14.803 0.002398	0.606 292.8 674.6 56.5	11.1 -0.9 -0.2 5.2	10760 2920 -54	-224 52 19966 36	0.086682 -0.023526 -0.000438	0.089817 -0.000289 -0.000438	-0.000082 0.000019	11149 612208 1113	0.089817 0.007311 0.002106 0.712		
43 23	0 0 15	0 0 14.809 0.002398	0.606 293 675 56.7	12.3 -0.7 -0.4 5.7	11880 3288 -44	-22 50 23315 101	0.095569 -0.02645 -0.00035	0.099158 -0.000814 -0.00035	-0.000008 0.000018	12326 715368 1301	0.099158 0.008526 0.002487 0.7083		

RUN POINT	V/OR VKTS ALFS,U	MTUN QPSF BARO RHO	MTP RPM OMEG*R TTEMPF	THETA A1 B1 CONING	LIFTH,C DRAGH,C SIDEH,C	PITCHH,S ROLLH,S TORQ,C HFORCE	CLRH/S CXRH/S CYRH/S	CLRHS/S CXRHS/S CYRHS/S	CMYHS/S CMXHS/S	THRUST POW HP	CTH/S CPS CPO/S FMERIT
54	0	0	0.608	4	3434	-391	0.027506	0.028546	-0.000142	3564	0.028546
5	0	0	294.8	-0.2	954	-400	-0.007638	-0.000259	-0.000146	181349	0.002139
	15	14.773	679.2	0	17	5874	0.00014	0.00014		330	0.001206
		0.00238	59.1	2		32					0.4361
54	0	0	0.606	5.4	4748	-347	0.038281	0.039734	-0.000127	4928	0.039734
6	0	0	293.8	0.1	1321	-185	-0.010654	-0.000383	-0.000068	235661	0.002807
	15	14.773	676.9	0	34	7660	0.000277	0.000277		428	0.001275
		0.00238	59	2.7		47					0.5456
54	0	0	0.605	6.6	5719	-304	0.046291	0.048005	-0.000112	5931	0.048005
7	0	0	293.2	0.3	1571	-336	-0.012715	-0.000301	-0.000124	296540	0.003553
	15	14.773	675.5	0.1	48	9658	0.000388	0.000388		539	0.001519
		0.002381	58.9	3.1		37					0.5724
54	0	0	0.607	7.8	7133	-494	0.057452	0.059552	-0.000181	7394	0.059552
8	0	0	293.9	0	1946	-299	-0.015675	-0.000271	-0.00011	369966	0.004401
	15	14.774	677.1	0.2	38	12021	0.000309	0.000309		673	0.00159
		0.002381	58.9	3.7		34					0.6386
54	0	0	0.606	8.9	8145	-413	0.065716	0.068096	-0.000151	8440	0.068096
9	0	0	293.6	0.2	2212	-502	-0.017846	-0.000229	-0.000184	444842	0.005306
	15	14.775	676.4	0.1	28	14468	0.000228	0.000228		809	0.00187
		0.002382	58.8	4.1		28					0.6476
54	0	0	0.606	10.2	9651	-194	0.07775	0.080677	-0.000071	10014	0.080677
10	0	0	293.8	0.2	2675	-274	-0.021547	-0.00069	-0.0001	540573	0.006434
	15	14.775	676.9	-0.1	76	17570	0.000611	0.000611		983	0.002002
		0.002382	58.7	4.7		86					0.6888

RUN POINT	V/OR VKTS ALFS,U	MTUN QPSF BARO RHO	MTIP RPM OMEG*R TTEMPF	THETA		LIFTH,C DRAGH,C SIDEH,C	PITCHH,S		CLRHS/S CXRHS/S CYRHS/S	CMYHS/S CMXHS/S	THRUST		CTHS/ CPS CPO/S FMERIT
				A1	B1		TORQ,C HFORCE	CLRH/S CXRH/S CYRH/S			CLRH/S CXRHS/S CYRHS/S	POW HP	
54 11	0	0	0.603	11.5	10667	-594	0.086843	0.089912	-0.00022	11043	0.089912	11043 638567 1161	0.089912 0.00772 0.002506 0.6753
	0	292.3	0.5	2860	-404	-0.023289	-0.000018	-0.000149	0.00772				
	15	14.776	673.4	0.3	92	20862	0.000751	0.000751	0.000751	1161	0.002506		
		0.002381	58.9	5.1		2							
52 6	0	0	0.604	3.8	3591	-136	0.029118	0.030181	-0.00005	3722	0.030181	3722 173798 316	0.030181 0.002095 0.001081 0.4839
	0	291.9	0.1	980	-185	-0.007943	-0.000136	-0.000068	173798	0.002095			
	15	14.779	672.5	0	3	5686	0.000027	0.000027	0.000027	316	0.001081		
		0.002398	55.3	2.2		17							
52 7	0	0	0.606	5	4811	-258	0.0388	0.040189	-0.000094	4984	0.040189	4984 222625 405	0.040189 0.002662 0.001104 0.5852
	0	292.7	0	1299	-25	-0.010476	-0.000077	-0.000009	222625	0.002662			
	15	14.779	674.3	0.2	14	7263	0.000113	0.000113	0.000113	405	0.001104		
		0.002398	55.3	2.7		10							
52 8	0	0	0.606	6.1	5891	-384	0.047507	0.049174	-0.000141	6098	0.049174	6098 268426 488	0.049174 0.00321 0.001101 0.6569
	0	292.7	0.1	1574	-8	-0.012695	0.000033	-0.000003	268426	0.00321			
	15	14.779	674.3	0.3	19	8757	0.000152	0.000152	0.000152	488	0.001101		
		0.002398	55.3	3.1		-4							
52 9	0	0	0.606	7.3	7307	-235	0.059033	0.061121	-0.000086	7565	0.061121	7565 340434 619	0.061121 0.004083 0.001161 0.7157
	0	292.4	0.1	1961	-66	-0.01584	-0.000021	-0.000024	340434	0.004083			
	15	14.779	673.6	0.3	9	11118	0.000072	0.000072	0.000072	619	0.001161		
		0.002398	55.2	3.8		3							
52 10	0	0	0.606	8.4	8411	-257	0.067841	0.070223	-0.000094	8706	0.070223	8706 407773 741	0.070223 0.004879 0.001281 0.7375
	0	292.6	0	2248	-143	-0.018131	0.000045	-0.000052	407773	0.004879			
	15	14.779	674.1	0.3	-5	13308	-0.000042	-0.000042	-0.000042	741	0.001281		
		0.002399	55.1	4.4		-6							

RUN POINT	V/OR VKTS	MTUN QPSF	MTIP RPM	THETA A1	LIFTH,C DRAGH,C	PITCHH,S ROLLH,S	CLRH/S CXRH/S	CLRH/S CXRH/S	CMYHS/S CMXHS/S	THRUST POW	CTH/S CP/S
	ALFS,U	BARO	OMEG*R	B1	SIDEH,C	TORQ,C	CYRH/S	CYRH/S		HP	CPO/S
		RHO	TTEMPF	CONING		HFORCE					FMERIT
52	0	0	0.605	9.4	9427	-247	0.076298	0.078979	-0.000091	9758	0.078979
11	0	0	292.1	0	2521	-145	-0.020402	0.000041	-0.000053	476698	0.005734
	15	14.779	673	0.4	-16	15584	-0.000132	-0.000132		867	0.001441
		0.002399	55.1	4.6		-5					0.7486
52	0	0	0.606	10.4	10807	-361	0.087234	0.090254	-0.000132	11182	0.090254
12	0	0	292.5	-0.4	2868	-299	-0.023151	0.000215	-0.00011	560529	0.006714
	15	14.779	673.9	0.4	-48	18300	-0.000385	-0.000385		1019	0.00147
		0.002399	55.1	5.2		-27					0.781
52	0	0	0.606	11.3	12082	17	0.097527	0.101	0.000006	12512	0.101
13	0	0	292.5	-0.2	3253	137	-0.026259	-0.000123	0.00005	640279	0.00767
	15	14.779	673.9	0.6	-15	20903	-0.000121	-0.000121		1164	0.001462
		0.002399	55.1	5.6		15					0.8093
52	0	0	0.607	12.7	13316	8	0.107126	0.111029	0.000003	13801	0.111029
14	0	0	293	-0.1	3628	-75	-0.029183	-0.000462	-0.000027	770724	0.009185
	15	14.778	675	0.4	-53	25119	-0.000426	-0.000426		1401	0.002031
		0.002398	55.1	6.2		57					0.7789
52	0	0	0.604	13.9	13955	-115	0.113395	0.117498	-0.000043	14460	0.117498
15	0	0	291.5	-0.2	3788	-283	-0.03078	-0.000382	-0.000105	869803	0.010525
	15	14.778	671.6	0.4	-79	28494	-0.000639	-0.000639		1581	0.002735
		0.002399	55	6.8		47					0.74
52	0	0	0.604	4.4	4217	-67	0.034245	0.035475	-0.000025	4369	0.035475
16	0	0	291.6	-0.2	1140	-119	-0.009258	-0.000079	-0.000044	196472	0.002375
	15	14.777	671.8	0.1	-10	6434	-0.000082	-0.000082		357	0.001083
		0.002399	54.9	2.5		10					0.5441

RUN POINT	V/OR VKTS ALFS,U	MTUN QPSF BARO	MTIP RPM OMEG*R TTEMPF	THETA A1 B1 CONING	LIFTH,C DRAGH,C SIDEH,C	PITCHH,S ROLLH,S TORQ,C HFORCE	CLRH/S CXRH/S CYRH/S	CLRHS/S CXRHS/S CYRHS/S	CMYHS/S CMXHS/S	THRUST POW HP	CTH/S CP/S CPO/S FMERIT
52	0	0	0.604	5.5	5335	-449	0.043346	0.044833	-0.000166	5517	0.044833
17	0	0	291.5	-0.1	1409	-183	-0.011449	0.00016	-0.000068	241801	0.002926
	15	14.777	671.6	0.4	-12	7921	-0.000096	-0.000096		440	0.00109
		0.002399	54.9	2.9		-20					0.6275
52	0	0	0.605	6.6	6614	-81	0.053525	0.055419	-0.00003	6848	0.055419
18	0	0	292.1	0	1775	-129	-0.014366	-0.000024	-0.000048	303273	0.003647
	15	14.777	673	0.2	-23	9915	-0.000185	-0.000185		551	0.001124
		0.002399	54.9	3.4		3					0.6918
52	0	0	0.607	7.6	7542	-179	0.0607	0.062845	-0.000065	7809	0.062845
19	0	0	292.9	0	2023	-162	-0.016278	-0.000013	-0.000059	355375	0.004238
	15	14.777	674.8	0.2	-10	11586	-0.000083	-0.000083		646	0.001192
		0.002399	54.9	4		2					0.7188
52	0	0	0.606	8.7	8816	-419	0.071101	0.07353	-0.000154	9118	0.07353
20	0	0	292.6	-0.1	2325	-206	-0.018747	0.000294	-0.000076	424276	0.005076
	15	14.777	674.1	0.6	-33	13847	-0.000268	-0.000268		771	0.00122
		0.002399	54.9	4.3		-36					0.7596
52	0	0	0.605	9.6	9955	-313	0.080558	0.0833	-0.000115	10294	0.0833
21	0	0	292.1	-0.4	2620	-223	-0.0212	0.000373	-0.000082	488653	0.005876
	15	14.777	673	0.6	-83	15975	-0.000673	-0.000673		888	0.001227
		0.002399	54.9	4.9		-46					0.7912
52	0	0	0.605	11	11455	-366	0.092861	0.096104	-0.000135	11855	0.096104
22	0	0	291.9	0.1	3054	138	-0.024755	0.000122	0.000051	604149	0.007283
	15	14.777	672.5	0.5	27	19764	0.000217	0.000217		1098	0.001521
		0.002398	55.1	5.6		-15					0.7911

RUN POINT	V/OR VKTS	MTUN QPSF	MTUN BARO	MTP RPM	THETA A1	LIFTH,C DRAGH,C	PITCHH,S ROLLH,S	CLRH/S CXRH/S	CLRH/S CXRH/S	CLRH/S CXRH/S	CLRH/S CXRH/S	CMYHS/S CMXHS/S	THRUST POW	CTH/S CP/S
52	0	0	0	0.607	11.8	12396	-186	0.099663	0.103137	-0.000068			12828	0.103137
	0	0	0	293.1	-0.5	3302	-133	-0.026545	0.000154	-0.000049			673590	0.00802
	15	14.777	14.777	675.3	0.6	-85	21946	-0.000687	-0.000687				1225	0.001615
		0.002398	0.002398	55.1	5.9		-19							0.7986
52	0	0	0	0.608	13.2	13911	-297	0.111616	0.115527	-0.000108			14398	0.115527
	0	0	0	293.4	-0.4	3714	-284	-0.029803	0.000101	-0.000103			822663	0.009765
	15	14.777	14.777	675.9	0.5	-84	26775	-0.000673	-0.000673				1496	0.002171
		0.002398	0.002398	55.1	6.5		-13							0.7776



## **APPENDIX B**

### **FORWARD FLIGHT PERFORMANCE DATA**



## Forward Flight Performance Data

Performance data are divided into two sections; thrust sweep data and speed sweep data. Data for both forward flight thrust sweep conditions and speed sweep conditions with minimized flapping trim are presented in tabulated form in this appendix. Thrust sweep data runs are grouped in terms of increasing rotor advance ratio and shaft angle-of-attack,  $\alpha_s$ . Speed sweep data runs are grouped in terms of increasing shaft angle-of-attack,  $\alpha_s$  and thrust condition. No wall corrections have been applied to this data. Definitions of the measurements that are presented in this section are shown below. Identification of test conditions and its location within this appendix are presented following these definitions.

### Nomenclature

A	rotor disk area, $\pi R^2$ , ft <sup>2</sup>
ALFS,U, $\alpha_s$	rotor shaft angle, positive aft of vertical, deg
A1	coefficient in the representation of rotor blade lateral cyclic pitch (fixed system measurement) $\theta = \text{THETA} - A1 \cos \psi - B1 \sin \psi$ , deg
b	number of rotor blades
B1	coefficient in the representation of rotor blade longitudinal cyclic pitch (fixed system measurement) $\theta = \text{THETA} - A1 \cos \psi - B1 \sin \psi$ , deg
BARO	atmospheric pressure, lb/ft <sup>2</sup>
c	airfoil chord length, ft
CLRH/S	rotor lift force coefficient divided by rotor solidity, wind axis, positive up, $LIFTH, C/\rho(\Omega R)^2 S_R$
CLRHS/S	rotor lift force coefficient divided by rotor solidity, shaft axis, $LIFTH, S/\rho(\Omega R)^2 S_R$
CMXHS/S	rotor rolling moment coefficient divided by rotor solidity, shaft axis, $ROLLH, S/\rho S_R(\Omega R)^2 R$
CMYHS/S	rotor pitching moment coefficient divided by rotor solidity, shaft axis, $PITCHH, S/\rho S_R(\Omega R)^2 R$
CONING	mean flap angle, deg
CP/S	rotor power coefficient divided by rotor solidity, $POW/\rho(\Omega R)^3 S_R$
CPO/S	rotor non-ideal power coefficient divided by rotor solidity, $CP/S - CP/S \text{ ideal}$
$C_s$	speed of sound, ft/s
CTH/S	rotor thrust coefficient divided by rotor solidity, $THRUST / \rho(\Omega R)^2 S_R$
CXRH/S	rotor propulsive force coefficient divided by rotor solidity, wind axis, positive forward, $-DRAGH, C/\rho(\Omega R)^2 S_R$
CXRHS/S	rotor propulsive force coefficient divided by rotor solidity, shaft axis, positive forward, $-DRAGH, S/\rho(\Omega R)^2 S_R$
CYRH/S	rotor side force coefficient divided by rotor solidity, wind axis, $SIDEH, C/\rho(\Omega R)^2 S_R$

CYRHS/S	rotor side force coefficient divided by rotor solidity, shaft axis, $SIDEH, S/\rho (\Omega R)^2 S_R$
DRAGH,C	rotor wind-axis drag, positive downstream, lb
DRAGH,S	rotor shaft-axis drag, positive downstream, lb
FE	equivalent rotor drag area, $ft^2$
$f_{hel}$	equivalent airframe drag area, $ft^2$
HFORCE	rotor propulsive force, shaft axis, positive forward, lb
HP	rotor horsepower, $POW/550$
L/DR	rotor lift to drag ratio
LIFTH,C	rotor wind-axis lift, positive up, lb
LIFTH,S	rotor shaft-axis lift, positive up, lb
MTUN	tunnel Mach number, $V/CS$
MTIP	rotor rotational tip Mach number, $\Omega R/CS$
OMEG*R	rotor tip speed, $\Omega R$ , ft/sec
PITCHH,S	rotor shaft-axis pitching moment, positive nose up, ft-lb
POINT	data point number
POW	rotor shaft power, $TORQ, C * \Omega$ , ft-lb/s
QPSF	free-stream dynamic pressure, $lb/ft^2$
R	rotor radius, ft
RHO, $\rho$	free-stream air density, $\rho$ , slug/ $ft^3$
ROLLH,S	rotor shaft-axis rolling moment, positive right wing down, ft-lb
RPM	rotor rotation rate, rev/min.
RUN	data run number
SIDEH,C	rotor side force, wind axis, positive right, lb
SIDEH,S	rotor side force, shaft-axis, positive right, lb
SKANGLE	rotor wake skew angle, positive relative to normal to rotor disk, $\tan^{-1} (\mu^*/\lambda)$ , deg
$S_R$	rotor blade area, $bcR$ , $ft^2$
THETA	rotor collective( fixed system measurments), deg

THRUST	rotor thrust, perpendicular to tip-path-plane, positive up, lb
TORQ,C	flexcoupling or rotor shaft torque, ft-lb
TTEMPF	tunnel air temp, F°
V/OR, $\mu$	rotor advance ratio, $V/\Omega R$
V	free stream velocity, ft/s
VD	rotor vehicle descent, positive down, $60 * V * \sin(\tan^{-1}((\text{DRAGH,C} - f_{hel} * \text{QPSF})/\text{LIFTH,C}))$ , ft/min
VKTS	free stream velocity, kt
$\theta$	blade pitch at specific blade azimuth position ( $\psi$ ), deg
$\lambda$	inflow ratio where velocity normal to disk, $(V(-\text{ALFS,u}) + v)/\Omega R$ or $\mu * \tan(-\text{ALFS,U}) + \lambda_i$
$\lambda_i$	induced inflow ratio
$\mu^*$	advance ratio prime where velocity parallel to rotor disk, $V \cos(-\text{ALFS,U})/\Omega R$
$v$	induced velocity, ft/s
$\sigma$	rotor solidity, $bc/\pi R$
$\psi$	rotor blade azimuth angle measured from downwind position in direction of rotation, deg
$\Omega$	rotor rotational speed, rad/s

### Thrust Sweep Performance Data Index

V/OR Advance Ratio	ALFS,U deg	RUN	PTS	CTH/S	DATA LOCATION
0.050	-2	44	14-23	.030-->.120	B-9 to B-10
0.081	0	48	32-36	.038-->.075	B-8 to B-11
-----	-----	-----	-----	-----	-----
0.100	-15	63	9-18	.030-->.120	B-11 to B-13
0.100	-10	45	5-14	.030-->.120	B-13 to B-14
0.100	-2	44	6-13	.038-->.100	B-14 to B-16
0.100	5	46	5-10	.050-->.100	B-16 to B-17
0.100	10	47 49	5-8 5-12	.070-->.101 .070-->.120	B-17 B-17 to B-19
-----	-----	-----	-----	-----	-----
0.125	5	26 29	12-18 5-12	.054-->.111 .060-->.100	B-19 to B-20 B-20 to B-21
0.125	10	30	5-11	.064-->.121	B-21 to B-22
-----	-----	-----	-----	-----	-----
0.150	-15	63	19-27	.031-->.111	B-22 to B-24
0.150	-10	21 22	23-31 12-22	.031-->.098 .023-->.119	B-24 to B-25 B-25 to B-27
0.150	-2	24	7-13	.041-->.120	B-27 to B-28
0.150	5	28	7-14	.059-->.119	B-28 to B-30
0.150	10	30	12-17	.070-->.119	B-30 to B-31

**Thrust Sweep Performance Data Index  
(Continued)**

V/OR Advance Ratio	ALFS,U deg	RUN	PTS	CTH/S	DATA LOCATION
.200	-10	22	23-27	.014-->.060	B-31
		23	5-14	.015-->.120	B-32 to B-33
.200	-2	25	5-13	.041-->.118	B-33 to B-35
.200	5	28	15-21	.063-->.120	B-35 to B-36
.200	10	30	18-23	.078-->.121	B-36 to B-37
-----	-----	-----	-----	-----	-----
.250	-15	63	28-35	.031-->.090	B-37 to B-38
.250	-10	23	15-24	.030-->.116	B-38 to B-40
.250	-2	25	14-21	.038-->.105	B-40 to B-41
.250	5	29	13-19	.070-->.120	B-41 to B-42
.250	10	31	11-16	.083-->.120	B-42 to B-43

### Speed Sweep Performance Data Index

ALFS,U deg	CTH/S	RUN	PTS	V/OR Advance Ratio	DATA LOCATION
-10	0.065	36	6-11, 22-33	.251-->.006	B-44 to B-46
-5	0.065	51	5-18	.250-->.011	B-47 to B-49
-2	0.065	32	7-19	.250-->.000	B-49 to B-51
	0.065	34	5-18	.250-->.032	B-51 to B-53
5	0.065	38	5-21	.250-->.010	B-53 to B-56
-----	-----	-----	-----	-----	-----
-10	0.080	37	5-18	.251-->.011	B-56 to B-58
-5	0.080	53	5-10,12-21	.250-->.014	B-59 to B-61
-2	0.080	32	20-32	.250-->.000	B-61 to B-63
	0.080	35	5-19	.251-->.031	B-63 to B-66
0	0.080	48	5-31	.013->.250->0	B-66 to B-70
5	0.080	39	6-20	.250-->.011	B-70 to B-73
10	.0080	41	5-18	.252-->.010	B-73 to B-75
-----	-----	-----	-----	-----	-----
10	0.084	31	17-22	.252-->.080	B-75 to B-76
-----	-----	-----	-----	-----	-----
-10	0.100	37	19-31	.251-->.011	B-76 to B-78
-2	0.100	33	5-15	.251-->.000	B-78 to B-80
		35	20-30	.251-->.030	B-80 to B-82
5	0.100	39	21-32	.249-->.010	B-82 to B-84
10	0.100	41	19-30	.251-->.000	B-84 to B-86

RUN POINT	V/OR VKTS ALFS,U	MTUN QPSF BARO RHO	MTIP RPM OMEG*R TTEMPF	THETA		LIFTH,C DRAGH,C SIDEH,C SKANGLE	PITCHH,S ROLLH,S TORQ,C HFORCE		CLRH/S CXRH/S CYRH/S	CLRHS/S CXRHS/S CYRHS/S	CMYHS/S CMXHS/S FE	THRUST		CTH/S CP/S CPO/S L/DR
				A1	B1							POW	HP	VD
44	0.051	0.031	0.606	2.3	3711	251	0.029976	0.029989	0.000092	3713	0.029989			
14	20.5	1.42	294.2	-1.9	-111	-9	0.0009	-0.000147	-0.000003	139009	0.001657			
	-2	14.765	677.8	0.6	-90	4512	-0.000728	-0.000728	-78.52	253	0.000952			
		0.002369	60.7	2.2	66.7	18				-53	0.95			
44	0.051	0.031	0.605	3.8	5010	262	0.04066	0.040676	0.000097	5012	0.040676			
15	20.5	1.42	293.5	-2.2	-142	-18	0.001156	-0.000263	-0.000006	180102	0.002162			
	-2	14.765	676.2	0.7	-131	5860	-0.001064	-0.001064	-100.47	327	0.000894			
		0.002369	60.7	2.8	61.38	32				-52	0.99			
44	0.051	0.031	0.606	5.2	6249	243	0.050579	0.050599	0.000089	6251	0.050599			
16	20.4	1.41	293.9	-2.3	-178	-4	0.001437	-0.000329	-0.000001	230147	0.002751			
	-2	14.765	677.1	0.9	-168	7478	-0.001357	-0.001357	-126.1	418	0.000799			
		0.002369	60.7	3.3	57.05	41				-53	0.96			
44	0.051	0.031	0.605	6.4	7449	380	0.060331	0.060349	0.00014	7451	0.060349			
17	20.4	1.41	293.8	-2.4	-193	-61	0.001565	-0.000542	-0.000022	283294	0.00339			
	-2	14.765	676.9	0.9	-218	9208	-0.001764	-0.001764	-137.2	515	0.000638			
		0.002369	60.7	3.8	53.63	67				-49	0.93			
44	0.051	0.031	0.605	7.7	8796	328	0.071395	0.071419	0.000121	8799	0.071419			
18	20.4	1.41	293.5	-2.5	-238	-103	0.001936	-0.000557	-0.000038	348763	0.004186			
	-2	14.765	676.2	1.1	-274	11347	-0.002221	-0.002221	-169.37	634	0.000495			
		0.002369	60.7	4.4	50.39	69				-52	0.89			
44	0.051	0.031	0.605	8.7	9852	431	0.07979	0.079811	0.000159	9855	0.079811			
19	20.5	1.42	293.8	-2.5	-248	-126	0.00201	-0.000776	-0.000046	408682	0.00489			
	-2	14.766	676.9	1	-322	13283	-0.002607	-0.002607	-175.02	743	0.000529			
		0.002369	60.7	4.8	48.35	96				-49	0.85			

RUN POINT	V/OR VKTS ALFS,U	MTUN QPSF BARO RHO	MTIP RPM OMEG*R TTEMPF	THETA		LIFTH,C DRAGH,C SIDEH,C SKANGLE	PITCHH,S ROLLH,S TORQ,C HFORCE		CLRH/S CXRH/S CYRH/S	CLRHS/S CXRHS/S CYRHS/S	CMYHS/S CMXHS/S FE	THRUST		CTHS/ CP/S CPO/S L/DR		
				A1	B1		CONING	SKANGLE				HFORCE	POW		HP	VD
44	0.051	0.031	0.606	10	11255		311		0.09109	0.091121	0.000114	11259	0.091121			
20	20.4	1.41	293.9	-2.6	-307		-147		0.002482	-0.000699	-0.000054	499551	0.005971			
	-2	14.766	677.1	1.4	-377		16231		-0.003055	-0.003055	-217.77	908	0.000652			
		0.002369	60.7	5.4	45.68		86					-53	0.79			
44	0.051	0.031	0.608	11.2	12562		472		0.100972	0.100996	0.000173	12565	0.100996			
21	20.4	1.41	294.9	-2.6	-303		-86		0.002438	-0.001088	-0.000031	593208	0.007018			
	-2	14.766	679.4	1.3	-417		19209		-0.003355	-0.003355	-215.37	1079	0.000811			
		0.00237	60.7	5.9	43.64		135					-47	0.74			
44	0.051	0.031	0.605	12.4	13654		350		0.110573	0.110613	0.000129	13659	0.110613			
22	20.4	1.41	293.8	-2.8	-379		-170		0.003071	-0.00079	-0.000063	691181	0.008269			
	-2	14.766	676.9	1.6	-469		22465		-0.003802	-0.003802	-269.33	1257	0.001155			
		0.00237	60.7	6.3	42.12		98					-55	0.69			
44	0.051	0.031	0.606	13.8	14820		362		0.119888	0.119939	0.000133	14827	0.119939			
23	20.4	1.41	293.9	-2.7	-437		-128		0.003537	-0.000649	-0.000047	822161	0.009823			
	-2	14.766	677.1	1.9	-492		26713		-0.003983	-0.003983	-310.52	1495	0.001789			
		0.002371	60.5	6.8	40.66		80					-59	0.63			
48	0.081	0.049	0.605	2.2	4673		86		0.037936	0.037936	0.000032	4673	0.037936			
32	32.4	3.58	292.4	-1.9	37		-141		-0.0003	-0.0003	-0.000052	139164	0.001677			
	0	14.761	673.6	1	-87		4545		-0.000708	-0.000708	10.32	253	0.001039			
		0.002386	56.7	2.7	78.13		37					56	1.81			
48	0.081	0.049	0.608	3.7	6242		144		0.050123	0.050123	0.000053	6242	0.050123			
33	32.4	3.57	294	-2.3	48		-187		-0.000386	-0.000386	-0.000068	182914	0.002168			
	0	14.762	677.3	1.2	-142		5941		-0.001139	-0.001139	13.47	333	0.001036			
		0.002387	56.7	3.4	74.5		48					48	1.84			



RUN POINT	V/OR VKTS ALFS,U	MTUN QPSF BARO RHO	MTIP RPM OMEG* R	THETA A1 B1 CONING	LIFTH,C DRAGH,C SIDEH,C SKANGLE	PITCHH,S ROLLH,S TORQ,C HFORCE	CLRH/S CXRH/S CYRH/S	CLRHS/S CXRHS/S CYRHS/S	CMYHS/S CMXHS/S FE	THRUST POW HP VD	CTH/S CP/S CPO/S L/DR
48	0.081	0.049	0.605	4.9	7335	196	0.059503	0.059503	0.000072	7335	0.059503
34	32.5	3.59	292.5	-2.4	61	-124	-0.000493	-0.000493	-0.000046	219492	0.002642
	0	14.763	673.9	1.5	-174	7166	-0.001414	-0.001414	16.95	399	0.001055
		0.002387	56.7	3.9	72.25	61				47	1.8
48	0.081	0.049	0.607	6.1	8670	239	0.069915	0.069915	0.000088	8670	0.069915
35	32.5	3.6	293.3	-2.6	81	-148	-0.00065	-0.00065	-0.000054	274869	0.00328
	0	14.763	675.7	1.7	-231	8949	-0.001865	-0.001865	22.42	500	0.001083
		0.002388	56.5	4.4	69.63	81				47	1.7
48	0.081	0.049	0.605	6.7	9219	222	0.074841	0.074841	0.000082	9219	0.074841
36	32.5	3.59	292.3	-2.7	86	-156	-0.000695	-0.000695	-0.000058	301428	0.003634
	0	14.763	673.4	1.8	-255	9848	-0.002071	-0.002071	23.88	548	0.001117
		0.002388	56.4	4.7	68.54	86				46	1.65
63	0.1	0.061	0.606	3.5	3580	99	0.028929	0.02978	0.000036	3686	0.02978
9	40.3	5.49	293.7	-0.7	-878	-198	0.007096	-0.000628	-0.000073	181640	0.002169
	-14.99	14.804	676.6	1	-12	5906	-0.000095	-0.000095	-159.89	330	0.001145
		0.002377	60.1	-0.1	69.28	78				-903	2
63	0.101	0.061	0.605	4.7	4844	22	0.039209	0.040431	0.000008	4995	0.040431
10	40.3	5.49	293.5	-0.9	-1221	-207	0.009881	-0.000597	-0.000076	229052	0.002742
	-14.99	14.804	676.2	1.3	-32	7452	-0.000255	-0.000255	-222.24	416	0.001176
		0.002376	60.3	0.4	67.43	74				-946	2.26
63	0.101	0.061	0.605	5.8	6026	45	0.048786	0.050346	0.000017	6218	0.050346
11	40.4	5.52	293.5	-1.2	-1538	-255	0.012449	-0.000593	-0.000094	280360	0.003357
	-14.99	14.803	676.2	1.6	-62	9122	-0.000501	-0.000501	-278.37	510	0.001219
		0.002375	60.4	0.9	65.83	73				-971	2.34

RUN POINT	V/OR VKTS ALFS,U	MTUN QPSF BARO RHO	MTIP RPM OMEG*R TTEMPF	THETA		LIFTH,C DRAGH,C SIDEH,C CONING SKANGLE	PITCHH,S		CLRH/S CXRH/S CYRH/S	CLRHS/S CXRHS/S CYRHS/S	CMYHS/S CMXHS/S FE	THRUST			CTHS/ CPS/ CPO/S L/DR
				A1	B1		ROLLH,S	TORQ,C				POW	HP	VD	
63	0.101	0.061	0.606	6.9	7257	181	0.058501	0.060376	0.000066	7490	0.060376				
12	40.4	5.51	294.1	-1.4	-1854	-341	0.014946	-0.000705	-0.000125	338005	0.004021				
	-15	14.804	677.6	1.7	-107	10975	-0.000862	-0.000862	-336.28	615	0.001246				
		0.002376	60.3	1.4	64.2	87				-978	2.34				
63	0.101	0.061	0.604	7.9	8388	254	0.068145	0.070326	0.000094	8656	0.070326				
13	40.4	5.51	292.9	-1.5	-2141	-325	0.017397	-0.000833	-0.00012	397451	0.004785				
	-15	14.803	674.8	2	-142	12958	-0.001153	-0.001153	-388.38	723	0.001309				
		0.002377	60.1	1.9	62.8	103				-982	2.27				
63	0.101	0.061	0.605	9	9613	205	0.077795	0.080332	0.000075	9926	0.080332				
14	40.3	5.5	293.4	-1.8	-2477	-418	0.020044	-0.000774	-0.000154	471405	0.005644				
	-15	14.804	675.9	2.3	-201	15343	-0.001627	-0.001627	-450.04	857	0.001378				
		0.002378	59.9	2.4	61.33	96				-993	2.16				
63	0.1	0.061	0.607	10.1	10857	278	0.087359	0.090203	0.000102	11210	0.090203				
15	40.3	5.5	294.2	-1.9	-2795	-362	0.022488	-0.000888	-0.000132	552154	0.006555				
	-15	14.803	677.8	2.5	-243	17922	-0.001952	-0.001952	-507.86	1004	0.001454				
		0.002378	59.7	2.9	59.94	110				-995	2.04				
63	0.101	0.061	0.606	11.2	11996	332	0.096788	0.09993	0.000122	12385	0.09993				
16	40.4	5.53	293.8	-2.1	-3084	-322	0.024881	-0.001017	-0.000118	638535	0.007612				
	-15	14.803	676.9	2.7	-281	20754	-0.002271	-0.002271	-557.24	1161	0.001628				
		0.002378	59.7	3.4	58.81	126				-998	1.91				
63	0.101	0.061	0.604	12.4	13082	342	0.106308	0.109795	0.000126	13512	0.109795				
17	40.4	5.53	292.7	-2.3	-3381	-378	0.027471	-0.000979	-0.000139	729128	0.008786				
	-15	14.803	674.3	2.9	-340	23788	-0.002765	-0.002765	-610.9	1326	0.001829				
		0.002379	59.5	3.9	57.72	121				-1005	1.79				

RUN POINT	V/OR VKTS ALFS,U	MTUN QPSF BARO RHO	MTP RPM OMEG*R TTEMPF	THETA A1 B1 CONING	LIFTH,C DRAGH,C SIDEH,C SKANGLE	PITCHH,S ROLLH,S TORQ,C HFORCE	CLRH/S CXRH/S CYRH/S	CLRHS/S CXRHS/S CYRHS/S	CMYHS/S CMXHS/S FE	THRUST POW HP VD	CTH/S CP/S CPO/S L/DR
63	0.1	0.061	0.607	14.1	14374	446	0.115692	0.119581	0.000163	14857	0.119581
18	40.3	5.5	294.1	-2.3	-3759	-543	0.030256	-0.000718	-0.000199	892188	0.010598
	-15	14.803	677.6	3.3	-408	28969	-0.003282	-0.003282	-683.09	1622	0.002574
		0.002379	59.5	4.4	56.41	89				-1015	1.54
45	0.099	0.06	0.608	2.8	3713	-89	0.029811	0.030156	-0.000032	3756	0.030156
5	39.8	5.37	294.7	-0.9	-573	-165	0.004597	-0.000649	-0.00006	162237	0.001919
	-10	14.77	678.9	1.1	-37	5257	-0.000296	-0.000296	-106.62	295	0.001128
		0.002376	59.1	2.2	73.82	81				-547	2.02
45	0.099	0.06	0.607	3.9	4894	-34	0.039483	0.039968	-0.000013	4954	0.039968
6	39.8	5.37	294	-1.2	-774	-162	0.006244	-0.000707	-0.000059	197452	0.002352
	-10	14.771	677.3	1.2	-58	6413	-0.000465	-0.000465	-144.12	359	0.001145
		0.002375	59.2	2.7	71.99	88				-579	2.26
45	0.1	0.06	0.606	5.1	6166	90	0.049894	0.050515	0.000033	6242	0.050515
7	39.9	5.39	293.6	-1.6	-982	-234	0.007946	-0.000838	-0.000086	241997	0.002895
	-10	14.771	676.4	1.4	-96	7871	-0.000777	-0.000777	-182.17	440	0.001169
		0.002375	59.3	3.3	70.15	104				-595	2.36
45	0.1	0.06	0.604	6.2	7377	138	0.059999	0.060762	0.000051	7471	0.060762
8	40	5.4	292.8	-1.6	-1186	-266	0.009644	-0.000922	-0.000098	291836	0.003519
	-10	14.771	674.6	1.7	-137	9518	-0.001116	-0.001116	-219.54	531	0.001208
		0.002376	59.1	3.8	68.47	113				-608	2.35
45	0.1	0.06	0.604	7.2	8548	130	0.06957	0.070472	0.000048	8659	0.070472
9	40	5.41	292.7	-1.8	-1386	-250	0.011279	-0.000973	-0.000092	348057	0.004201
	-10	14.771	674.3	2	-176	11355	-0.001436	-0.001436	-256.12	633	0.001263
		0.002376	59.1	4.3	66.93	120				-618	2.27

RUN POINT	V/OR VKTS ALFS,U	MTUN QPSF BARO RHO	MTTP RPM OMEG*R TTEMPF	THETA A1 B1 CONING	LIFTH,C DRAGH,C SIDEH,C SKANGLE	PITCHH,S ROLLH,S TORQ,C HFORCE	CLRH/S CXRH/S CYRH/S	CLRHS/S CXRHS/S CYRHS/S	CMYHS/S CMXHS/S FE	THRUST POW HP VD	CTH/S CP/S CPO/S LDR
45	0.1	0.061	0.605	8.5	9857	117	0.079986	0.081048	0.000043	9988	0.081048
10	40	5.42	293.1	-2.1	-1616	-365	0.013112	-0.000977	-0.000135	419076	0.005036
	-10	14.772	675.3	2.2	-249	13654	-0.002024	-0.002024	-298.07	762	0.001332
		0.002376	59	4.9	65.29	120				-630	2.15
45	0.1	0.061	0.604	9.5	10916	177	0.088857	0.090024	0.000066	11059	0.090024
11	40	5.42	292.6	-2.2	-1781	-295	0.014499	-0.001151	-0.000109	482035	0.005821
	-10	14.772	674.1	2.4	-285	15732	-0.002319	-0.002319	-328.54	876	0.001421
		0.002377	58.9	5.4	64.02	141				-629	2.04
45	0.1	0.061	0.605	10.7	12234	96	0.099163	0.100513	0.000036	12400	0.100513
12	40	5.42	293.2	-2.6	-2029	-422	0.016447	-0.001022	-0.000155	576992	0.006924
	-10	14.772	675.5	2.7	-369	18792	-0.002994	-0.002994	-374.29	1049	0.001601
		0.002377	58.7	5.9	62.51	126				-642	1.88
45	0.1	0.061	0.605	12	13364	179	0.108541	0.110049	0.000066	13549	0.110049
13	40	5.43	292.9	-2.7	-2238	-444	0.01818	-0.000944	-0.000164	683095	0.008222
	-10	14.773	674.8	3.1	-429	22271	-0.003481	-0.003481	-412.11	1242	0.002002
		0.002377	58.7	6.3	61.31	116				-651	1.7
45	0.1	0.061	0.606	13.6	14596	236	0.118274	0.120002	0.000087	14809	0.120002
14	40.1	5.45	293.3	-2.8	-2505	-533	0.020301	-0.000546	-0.000196	836659	0.010033
	-10	14.773	675.7	3.6	-481	27240	-0.003899	-0.003899	-459.53	1521	0.002779
		0.002376	58.9	6.8	60.08	67				-670	1.48
44	0.102	0.061	0.604	2.2	4644	148	0.037868	0.037875	0.000055	4645	0.037875
6	40.6	5.56	292.9	-1.5	-105	-97	0.00086	-0.000462	-0.000036	107629	0.001301
	-2	14.763	674.8	1	-78	3509	-0.000639	-0.000639	-18.96	196	0.000685
		0.002368	60.4	2.6	80.33	57				-34	3.17

RUN POINT	V/OR VKTS ALFS,U	MTUN QPSF BARO RHO	MTIP RPM OMEG* R	THETA A1 B1 CONING	LIFTH,C DRAGH,C SIDEH,C SKANGLE	PITCHH,S ROLLH,S TORQ,C HFORCE	CLRH/S CXRH/S CYRH/S	CLRHS/S CXRHS/S CYRHS/S	CMYHS/S CMXHS/S FE	THRUST POW HP VD	CTH/S CP/S CPO/S L/DR
44	0.101	0.061	0.605	2.6	5052	170	0.040991	0.040999	0.000063	5053	0.040999
7	40.7	5.57	293.6	-1.5	-117	-71	0.000951	-0.00048	-0.000026	121796	0.001461
	-2	14.763	676.4	1.2	-86	3961	-0.000697	-0.000697	-21.02	221	0.000745
		0.002368	60.3	2.8	79.7	59				-41	3.05
44	0.101	0.061	0.607	3.7	6176	215	0.049896	0.04991	0.000079	6178	0.04991
8	40.6	5.56	294.3	-1.9	-156	-107	0.001264	-0.000478	-0.000039	161496	0.001924
	-2	14.763	678	1.3	-126	5240	-0.001018	-0.001018	-28.12	294	0.000876
		0.002367	60.5	3.3	77.94	59				-60	2.81
44	0.101	0.061	0.605	4.8	7449	187	0.060478	0.060499	0.000069	7451	0.060499
9	40.6	5.56	293.5	-2.1	-204	-136	0.001654	-0.000458	-0.00005	204859	0.00246
	-2	14.764	676.2	1.7	-176	6665	-0.001426	-0.001426	-36.61	372	0.000943
		0.002368	60.3	3.8	76.03	56				-76	2.67
44	0.101	0.061	0.606	5.9	8695	282	0.070501	0.070523	0.000104	8698	0.070523
10	40.7	5.57	293.7	-2.3	-230	-120	0.001861	-0.0006	-0.000044	250552	0.003002
	-2	14.764	676.6	2	-222	8146	-0.001802	-0.001802	-41.18	456	0.000981
		0.002368	60.3	4.4	74.25	74				-77	2.54
44	0.101	0.061	0.606	7.1	9926	226	0.080378	0.080408	0.000083	9930	0.080408
11	40.6	5.56	293.9	-2.4	-280	-141	0.002267	-0.00054	-0.000052	307814	0.003681
	-2	14.764	677.1	2.3	-285	10001	-0.002304	-0.002304	-50.31	560	0.001065
		0.002368	60.3	4.9	72.51	67				-88	2.36
44	0.101	0.061	0.607	8.3	11149	266	0.090038	0.090072	0.000098	11153	0.090072
12	40.7	5.59	294.3	-2.8	-317	-198	0.002563	-0.000581	-0.000073	372518	0.004437
	-2	14.764	678	2.5	-362	12087	-0.00292	-0.00292	-56.82	677	0.001184
		0.002368	60.3	5.4	70.93	72				-93	2.18

RUN POINT	V/OR VKTS ALFS,U	MTUN QPSF BARO RHO	MTTP RPM OMEG*R TTEMPF	THETA A1 B1 CONING	LIFTH,C DRAGH,C SIDEH,C SKANGLE	PITCHH,S ROLLH,S TORQ,C HFORCE	CLRH/S CXRH/S CYRH/S	CLRHS/S CXRHS/S CYRHS/S	CMYHS/S CMXHS/S FE	THRUST POW HP VD	CTH/S CPS CPO/S L/DR
44	0.101	0.061	0.606	9.3	12354	358	0.099976	0.10001	0.000132	12359	0.10001
13	40.7	5.59	294	-2.9	-336	-146	0.002721	-0.000769	-0.000054	443105	0.005294
	-2	14.764	677.3	2.7	-420	14392	-0.003397	-0.003397	-60.21	806	0.001331
		0.002368	60.3	5.9	69.4	95				-90	2.02
46	0.1	0.061	0.605	4.6	8597	172	0.069567	0.069881	0.000063	8636	0.069881
5	40	5.44	292.7	-2.5	821	-112	-0.006646	-0.000558	-0.000041	177815	0.002134
	5	14.788	674.3	1.8	-198	5801	-0.0016	-0.0016	150.92	323	0.000991
		0.002389	56.9	4.5	80.26	69				415	2.49
46	0.1	0.061	0.605	8	12273	299	0.099326	0.099769	0.00011	12328	0.099769
6	40	5.44	292.7	-3.4	1165	-229	-0.009425	-0.000732	-0.000084	324137	0.00389
	5	14.787	674.3	2.5	-406	10575	-0.003285	-0.003285	214	589	0.001147
		0.002389	56.9	6.1	74.65	90				404	2.06
46	0.1	0.061	0.606	2.3	6143	51	0.049601	0.049816	0.000019	6170	0.049816
7	40.1	5.48	292.9	-1.9	574	-21	-0.004632	-0.000292	-0.000008	120236	0.001439
	5	14.788	674.8	1.4	-102	3920	-0.000826	-0.000826	104.64	219	0.000987
		0.002391	56.5	3.4	84.4	36				421	2.61
46	0.101	0.061	0.605	3.4	7402	192	0.059917	0.060181	0.000071	7435	0.060181
8	40.2	5.49	292.5	-2.2	697	-104	-0.005638	-0.000395	-0.000038	145068	0.001743
	5	14.788	673.9	1.5	-155	4736	-0.001255	-0.001255	126.82	264	0.000974
		0.002392	56.4	4	82.33	49				417	2.61
46	0.1	0.061	0.606	4.6	8604	138	0.069534	0.069827	0.000051	8640	0.069827
9	40.1	5.47	292.7	-2.6	792	-148	-0.006401	-0.000316	-0.000054	178690	0.002142
	5	14.788	674.3	1.8	-209	5830	-0.001692	-0.001692	144.73	325	0.000981
		0.002392	56.3	4.5	80.33	39				403	2.51

RUN POINT	V/OR VKTS	MTUN QPSF	MTIP RPM	THETA A1	LIFTH,C DRAGH,C	PITCHH,S ROLLH,S	CLRH/S CXRH/S	CLRHS/S CXRHS/S	CMYHS/S CMXHS/S	THRUST POW	CTH/S CPS
	ALFS,U	BARO	OMEG*R	B1	SIDEH,C	TORQ,C	CYRH/S	CYRHS/S	FE	HP	CPO/S
		RHO	TTEMPF	CONING	SKANGLE	HFORCE				VD	L/DR
46	0.101	0.061	0.605	5.7	9810	239	0.079524	0.079865	0.000088	9852	0.079865
10	40.1	5.48	292.2	-3	910	-134	-0.007379	-0.00042	-0.00005	218010	0.002625
	5	14.788	673.2	2.1	-261	7125	-0.002116	-0.002116	166.04	396	0.001015
		0.002393	56.1	5	78.46	52				402	2.37
47	0.101	0.061	0.604	3.5	8455	-44	0.068796	0.070013	-0.000016	8604	0.070013
5	40	5.46	291.1	-2.4	1602	-236	-0.013032	-0.000887	-0.000087	109694	0.001331
	10	14.786	670.6	1.4	-143	3598	-0.001163	-0.001163	293.2	199	0.000881
		0.002402	54.1	4.6	84.88	109				783	2.62
47	0.1	0.061	0.605	4.7	9779	-54	0.079215	0.080596	-0.00002	9949	0.080596
6	39.9	5.46	291.7	-2.7	1838	-241	-0.014886	-0.000904	-0.000089	142801	0.001721
	10	14.786	672	1.6	-193	4675	-0.001564	-0.001564	336.42	260	0.000876
		0.002403	53.9	5.2	82.6	112				773	2.47
47	0.1	0.061	0.606	5.7	10953	80	0.088574	0.090138	0.000029	11147	0.090138
7	39.9	5.46	291.9	-3	2072	-355	-0.016757	-0.001121	-0.00013	177659	0.002136
	10	14.786	672.5	1.8	-266	5812	-0.002149	-0.002149	379.37	323	0.000889
		0.002404	53.7	5.7	80.63	139				775	2.33
47	0.1	0.061	0.606	7.1	12318	29	0.099494	0.101203	0.000011	12530	0.101203
8	40	5.46	292.2	-3.4	2297	-246	-0.018549	-0.00099	-0.00009	233260	0.002799
	10	14.786	673.2	2.3	-320	7623	-0.002584	-0.002584	420.44	424	0.000961
		0.002402	54.1	6.3	78.43	123				762	2.14
49	0.1	0.061	0.605	3.6	8528	-100	0.069145	0.070314	-0.000037	8672	0.070314
5	39.9	5.45	291.5	-2.5	1576	-107	-0.012779	-0.000578	-0.000039	115237	0.001391
	10	14.778	671.6	1.5	-172	3775	-0.001397	-0.001397	289.1	210	0.00089
		0.002404	53.5	4.6	84.73	71				764	2.59

RUN POINT	V/OR VKTS ALFS,U	MTUN QPSF BARO RHO	MTP RPM OMEG*R TTEMPF	THETA		LIFTH,C DRAGH,C SIDEH,C CONING	PITCHH,S		CLRH/S CXRH/S CYRH/S	CLRH/S CXRH/S CYRH/S	CMYHS/S CMXHS/S FE	THRUST			CTH/S CP/S CPO/S LDR	
				A1	B1		ROLLH,S	TORQ,C				POW	HP	VD		
				SKANGLE			HFORCE									
				6.9	12156		64	0.098228	0.099873	0.000024	12360	0.099873				
49 6	0.1 39.9 10	0.061 5.44 14.778 0.002404	0.606 292 672.7 53.5	-3.4 2236 -367 78.63	-210 7475 91		-0.018067 -0.002963	-0.000736 -0.002963	-0.000077 410.88	228573 416 751	0.002746 0.000944 2.16					
49 7	0.1 39.9 10	0.061 5.44 14.777 0.002404	0.606 291.8 672.3 53.5	8451 1558 -163 84.84	-53 -56 3719 67		0.068393 -0.012611 -0.001319	0.069544 -0.000543 -0.001319	-0.00002 -0.000021 286.37	8594 113646 207 762	0.069544 0.001368 0.000882 2.6					
49 8	0.1 39.8 10	0.06 5.42 14.777 0.002404	0.606 291.9 672.5 53.5	9713 1802 -219 82.59	85 -104 4671 88		0.07855 -0.014571 -0.001771	0.079887 -0.00071 -0.001771	0.000031 -0.000038 332.36	9879 142780 260 761	0.079887 0.001717 0.000861 2.47					
49 9	0.1 39.8 10	0.06 5.42 14.776 0.002404	0.606 292 672.7 53.5	10832 1981 -282 80.72	24 -148 5850 70		0.087542 -0.016011 -0.002277	0.088993 -0.000567 -0.002277	0.000009 -0.000054 365.44	11011 178890 325 748	0.088993 0.002149 0.000877 2.33					
49 10	0.1 39.8 10	0.06 5.41 14.777 0.002404	0.607 292.4 673.6 53.5	12145 2239 -354 78.53	175 -163 7417 96		0.097884 -0.018043 -0.002854	0.09953 -0.000772 -0.002854	0.000064 -0.00006 413.76	12350 227101 413 750	0.09953 0.002717 0.000916 2.16					
49 11	0.1 39.8 10	0.06 5.41 14.777 0.002404	0.607 292.3 673.4 53.5	13381 2456 -439 76.6	215 -185 9275 95		0.107917 -0.019808 -0.003544	0.109717 -0.000768 -0.003544	0.000079 -0.000068 453.92	13604 283906 516 745	0.109717 0.0034 0.001002 2					



RUN POINT	V/OR VKTS	MTUN QPSF	MTP RPM	THETA A1	LIFTH,C DRAGH,C	PITCHH,S ROLLH,S	CLRH/S CXRH/S	CLRHS/S CXRHS/S	CMYHS/S CMXHS/S	THRUST POW	CTH/S CP/S
	ALFS,U	BARO	OMEG* R	B1	SIDEH,C	TORQ,C	CYRH/S	CYRHS/S	FE	HP	CPO/S
		RHO	TTEMPF	CONING	SKANGLE	HFORCE				VD	L/DR
49	0.1	0.06	0.606	9.2	14577	202	0.117841	0.119753	0.000074	14814	0.119753
12	39.7	5.4	291.9	-3.9	2638	-92	-0.021322	-0.000536	-0.000034	355725	0.004276
	10	14.777	672.5	2.9	-513	11637	-0.00415	-0.00415	488.4	647	0.001189
		0.002405	53.3	7.3	74.77	66				733	1.83
26	0.124	0.075	0.605	2.2	6588	139	0.054041	0.054297	0.000052	6619	0.054297
12	49.5	8.26	292.2	-1.8	647	-154	-0.005305	-0.000575	-0.000058	101479	0.001237
	5	14.634	673.2	1.4	-123	3316	-0.001012	-0.001012	78.29	185	0.001016
		0.002365	55.7	3.6	87.42	70				564	3.54
26	0.124	0.075	0.605	2.8	7304	103	0.060055	0.060327	0.000038	7337	0.060327
13	49.5	8.25	291.9	-1.7	699	58	-0.005744	-0.000488	0.000022	112694	0.001378
	5	14.634	672.5	1.7	-125	3687	-0.001032	-0.001032	84.68	205	0.001005
		0.002365	55.8	4	86.59	59				544	3.57
26	0.124	0.075	0.605	3.9	8456	131	0.069397	0.069705	0.000049	8494	0.069705
14	49.5	8.25	292.2	-2.1	800	-67	-0.006565	-0.000492	-0.000025	134596	0.001641
	5	14.634	673.2	1.9	-182	4399	-0.001495	-0.001495	96.96	245	0.001004
		0.002364	55.9	4.5	85.28	60				530	3.51
26	0.124	0.075	0.605	4.9	9714	243	0.079685	0.080041	0.000091	9758	0.080041
15	49.5	8.27	292.2	-2.3	923	0	-0.007573	-0.000599	0	164433	0.002004
	5	14.635	673.2	2.3	-221	5374	-0.001813	-0.001813	111.61	299	0.001033
		0.002365	55.7	5	83.9	73				525	3.36
26	0.124	0.075	0.605	6.1	10949	236	0.08984	0.090229	0.000088	10996	0.090229
16	49.5	8.26	291.8	-2.6	1022	-10	-0.008388	-0.000526	-0.000004	203791	0.002487
	5	14.636	672.3	2.7	-279	6669	-0.002288	-0.002288	123.74	371	0.001098
		0.002371	54.6	5.6	82.53	64				510	3.16

RUN POINT	V/OR VKTS ALFS,U	MTUN		MTIP		THETA		LIFTH,C		PITCHH,S		CLRH/S		CLRH/S		CMYHS/S		THRUST		CTH/S	
		QPSF	BARO	RHO	TTEMPF	CONING	SKANGLE	DRAGH,C	SIDEH,C	TORQ,C	HFORCE	CXRH/S	CYRH/S	CXRHS/S	CYRHS/S	CMXHS/S	FE	POW	HP	CP/S	CPO/S
26	0.124	0.075	0.605	0.605	7.1	12160	315	0.099871	0.100309	0.000118	12214	0.100309	0.000118	12214	0.100309	0.000118	12214	0.100309	0.000118	0.100309	0.100309
17	49.5	8.26	291.7	291.7	-2.8	1143	-13	-0.009391	-0.000651	-0.000005	245510	-0.000651	-0.000005	245510	-0.000651	-0.000005	245510	-0.000651	-0.000005	0.003	0.003
	5	14.636	672	672	2.9	-341	8037	-0.002804	-0.002804	138.42	446	-0.002804	-0.002804	446	-0.002804	138.42	446	-0.002804	138.42	0.001164	0.001164
		0.00237	54.7	54.7	6.2	81.21	79				509			509			509			2.98	2.98
26	0.124	0.075	0.605	0.605	8.3	13400	230	0.110145	0.110601	0.000086	13456	0.110601	0.000086	13456	0.110601	0.000086	13456	0.110601	0.000086	0.110601	0.110601
18	49.5	8.25	291.7	291.7	-3.2	1222	-60	-0.010041	-0.000403	-0.000022	302319	-0.000403	-0.000022	302319	-0.000403	-0.000022	302319	-0.000403	-0.000022	0.003698	0.003698
	5	14.636	672	672	3.4	-431	9897	-0.003544	-0.003544	148.06	550	-0.003544	-0.003544	550	-0.003544	148.06	550	-0.003544	148.06	0.001292	0.001292
		0.002368	55.1	55.1	6.7	79.88	49				491			491			491			2.77	2.77
29	0.125	0.076	0.606	0.606	2.8	7404	40	0.060071	0.060347	0.000015	7438	0.060347	0.000015	7438	0.060347	0.000015	7438	0.060347	0.000015	0.060347	0.060347
5	50.1	8.51	293.1	293.1	-1.8	714	-146	-0.005791	-0.000533	-0.000054	110428	-0.000533	-0.000054	110428	-0.000533	-0.000054	110428	-0.000533	-0.000054	0.001327	0.001327
	5	14.763	675.3	675.3	1.7	-136	3598	-0.001107	-0.001107	83.9	201	-0.001107	-0.001107	201	-0.001107	83.9	201	-0.001107	83.9	0.000975	0.000975
		0.002377	57.9	57.9	4	86.73	66				556			556			556			3.67	3.67
29	0.125	0.076	0.604	0.604	3.8	8513	177	0.069394	0.069715	0.000066	8552	0.069715	0.000066	8552	0.069715	0.000066	8552	0.069715	0.000066	0.069715	0.069715
6	50.1	8.49	292.4	292.4	-1.9	823	-44	-0.006713	-0.000639	-0.000016	129595	-0.000639	-0.000016	129595	-0.000639	-0.000016	129595	-0.000639	-0.000016	0.001568	0.001568
	5	14.763	673.6	673.6	1.9	-164	4232	-0.001334	-0.001334	97.03	236	-0.001334	-0.001334	236	-0.001334	97.03	236	-0.001334	97.03	0.000975	0.000975
		0.002377	57.9	57.9	4.5	85.49	78				548			548			548			3.61	3.61
29	0.125	0.076	0.607	0.607	4.9	9852	146	0.07966	0.080014	0.000054	9896	0.080014	0.000054	9896	0.080014	0.000054	9896	0.080014	0.000054	0.080014	0.080014
7	50.1	8.5	293.6	293.6	-2.4	932	-216	-0.007537	-0.000565	-0.000079	163361	-0.000565	-0.000079	163361	-0.000565	-0.000079	163361	-0.000565	-0.000079	0.001953	0.001953
	5	14.762	676.4	676.4	2.3	-243	5313	-0.001962	-0.001962	109.7	297	-0.001962	-0.001962	297	-0.001962	109.7	297	-0.001962	109.7	0.000997	0.000997
		0.002377	57.9	57.9	5.1	84.04	70				530			530			530			3.44	3.44
29	0.125	0.076	0.605	0.605	6	10992	222	0.089378	0.089774	0.000082	11041	0.089774	0.000082	11041	0.089774	0.000082	11041	0.089774	0.000082	0.089774	0.089774
8	50.1	8.49	292.8	292.8	-2.7	1038	-237	-0.008442	-0.00062	-0.000088	195587	-0.00062	-0.000088	195587	-0.00062	-0.000088	195587	-0.00062	-0.000088	0.002358	0.002358
	5	14.761	674.6	674.6	2.5	-303	6379	-0.002463	-0.002463	122.34	356	-0.002463	-0.002463	356	-0.002463	122.34	356	-0.002463	122.34	0.00103	0.00103
		0.002376	57.9	57.9	5.6	82.8	76				523			523			523			3.28	3.28

RUN POINT	V/OR VKTS	MTUN QPSF	MTIP RPM	THETA A1	LIFTH,C DRAGH,C	PITCHH,S ROLLH,S	CLRH/S CXRH/S	CLRH/S CXRH/S	CMYHS/S CMXHS/S	THRUST POW	CTH/S CP/S
	ALFS,U	BARO	OMEG*R	B1	SIDEH,C	TORQ,C	CYRH/S	CYRH/S	FE	HP	CPO/S
		RHO	TTEMPF	CONING	SKANGLE	HFORCE				VD	L/DR
29	0.125	0.076	0.606	7.1	12275	128	0.099581	0.099992	0.000047	12326	0.099992
9	50.1	8.49	293.1	-2.9	1117	-180	-0.009063	-0.00035	-0.000066	244203	0.002934
	5	14.762	675.3	3	-364	7956	-0.002954	-0.002954	131.65	444	0.001104
		0.002377	57.8	6.2	81.44	43				501	3.06
29	0.125	0.076	0.605	6.1	11112	192	0.090369	0.090746	0.000071	11158	0.090746
10	50	8.47	292.7	-2.8	1018	-166	-0.008278	-0.00037	-0.000061	200885	0.002423
	5	14.762	674.3	2.7	-309	6554	-0.002512	-0.002512	120.23	365	0.001018
		0.002377	57.7	5.7	82.65	46				508	3.27
29	0.125	0.076	0.605	6.1	11132	148	0.090685	0.091056	0.000055	11178	0.091056
11	50	8.48	292.4	-2.8	1009	-185	-0.008221	-0.000286	-0.000068	201663	0.002439
	5	14.762	673.6	2.7	-316	6586	-0.002577	-0.002577	119.07	367	0.001015
		0.002378	57.5	5.7	82.64	35				503	3.28
29	0.125	0.076	0.604	6.1	11105	143	0.090533	0.090904	0.000053	11150	0.090904
12	50	8.48	292.2	-2.8	1007	-181	-0.008209	-0.000287	-0.000067	202727	0.002455
	5	14.761	673.2	2.7	-315	6625	-0.002568	-0.002568	118.79	369	0.00104
		0.00238	57.2	5.7	82.67	35				503	3.26
30	0.125	0.076	0.605	2.2	7749	-86	0.06327	0.064353	-0.000032	7882	0.064353
5	49.9	8.38	293.1	-1.6	1442	-72	-0.011772	-0.000595	-0.000027	59493	0.000719
	10.01	14.703	675.3	1.5	-129	1938	-0.001055	-0.001055	171.98	108	0.000988
		0.002362	59.1	4.3	90.98	73				987	3.61
30	0.125	0.076	0.606	2.8	8511	-18	0.069208	0.070391	-0.000007	8657	0.070391
6	49.9	8.38	293.7	-1.8	1582	-133	-0.012867	-0.000641	-0.000049	65399	0.000786
	10.01	14.703	676.6	1.6	-160	2126	-0.001302	-0.001302	188.73	119	0.00095
		0.002362	59.1	4.6	90.08	79				981	3.61

RUN POINT	V/OR VKTS ALFS,U	MTUN QPSF BARO RHO	MTIP RPM OMEG*R TTEMPF	THETA A1 B1 CONING	LIFTH,C DRAGH,C SIDEH,C SKANGLE	PITCHH,S ROLLH,S TORQ,C HFORCE	CLRH/S CXRH/S CYRH/S	CLRHS/S CXRHS/S CYRHS/S	CMYHS/S CMXHS/S FE	THRUST POW HP VD	CTHS/ CP/S CPO/S L/D R
30	0.125	0.075	0.605	3.7	9628	83	0.07871	0.080061	0.000031	9793	0.080061
7	49.9	8.36	292.9	-2	1794	-101	-0.014665	-0.000076	-0.000038	78111	0.000946
	10.01	14.704	674.8	1.7	-189	2547	-0.001542	-0.001542	214.48	142	0.000917
		0.002362	59.1	5.2	88.74	93				975	3.54
30	0.124	0.075	0.606	4.7	10910	208	0.088806	0.090345	0.000077	11099	0.090345
8	49.9	8.36	293.5	-2.2	2043	-82	-0.016632	-0.000943	-0.00003	99161	0.001194
	10.01	14.705	676.2	1.8	-233	3226	-0.001896	-0.001896	244.31	180	0.000893
		0.002362	59	5.7	87.24	116				973	3.39
30	0.125	0.076	0.605	5.7	11984	155	0.097995	0.099661	0.000058	12188	0.099661
9	49.9	8.38	292.8	-2.6	2222	-137	-0.018167	-0.000857	-0.000051	124254	0.001506
	10.01	14.706	674.6	2.2	-293	4052	-0.002393	-0.002393	265.01	226	0.000899
		0.002363	58.9	6.2	86.03	105				962	3.24
30	0.124	0.075	0.607	6.8	13314	85	0.107978	0.10977	0.000031	13535	0.10977
10	49.9	8.37	294	-2.8	2437	-151	-0.019765	-0.000695	-0.000056	167349	0.002004
	10.01	14.706	677.3	2.6	-361	5436	-0.002928	-0.002928	291.03	304	0.000952
		0.002363	58.9	6.8	84.5	86				946	3.01
30	0.125	0.075	0.604	8	14576	256	0.119249	0.121272	0.000095	14823	0.121272
11	49.9	8.38	292.6	-3	2699	-84	-0.022083	-0.001019	-0.000031	210065	0.002549
	10.01	14.706	674.1	2.9	-410	6856	-0.003357	-0.003357	321.95	382	0.00105
		0.002365	58.5	7.4	83.1	125				953	2.81
63	0.151	0.091	0.604	4.4	3662	277	0.029801	0.030681	0.000103	3770	0.030681
19	60.3	12.31	292.7	-0.4	-900	-247	0.007322	-0.000641	-0.000091	206716	0.002495
	-15	14.802	674.3	1.6	-10	6744	-0.000083	-0.000083	-73.06	376	0.001169
		0.002376	59.3	-0.1	72.29	79				-1229	3.24

RUN POINT	V/OR VKTS	MTUN QPSF	MTIP RPM	THETA		LIFTH,C DRAGH,C	PITCHH,S ROLLH,S	CLRH/S CXRH/S	CLRHS/S CXRHS/S	CMYHS/S CMXHS/S	THRUST		CTH/S CPS
				A1	B1						POW	HP	
	ALFS,U	BARO	OMEG*R	CONING	SKANGLE	SIDEH,C	TORQ,C	CYRH/S	CYRHS/S	FE	VD	L/DR	
		RHO	TTEMPF			HFORCE							
63	0.15	0.091	0.605	5.4	4866		235	0.039506	0.040739	0.000087	5018		0.040739
20	60.1	12.24	293	-0.7	-1228		-172	0.009966	-0.000599	-0.000064	257166		0.003093
	-15	14.802	675	2	-25		8381	-0.000205	-0.000205	-100.27	468		0.001206
		0.002377	59.1	0.4	71.41		74				-1320		3.73
63	0.151	0.091	0.604	6.4	5964		95	0.048655	0.050253	0.000035	6160		0.050253
21	60.2	12.28	292.3	-0.9	-1542		-298	0.01258	-0.000441	-0.000111	308672		0.003739
	-15	14.802	673.4	2.6	-60		10084	-0.000486	-0.000486	-125.54	561		0.001254
		0.002377	59.1	0.9	70.64		54				-1389		3.99
63	0.151	0.091	0.604	7.3	7192		254	0.058593	0.060507	0.000094	7427		0.060507
22	60.3	12.3	292.5	-1	-1854		-307	0.015107	-0.000573	-0.000114	368748		0.004458
	-15	14.802	673.9	2.8	-90		12039	-0.000733	-0.000733	-150.71	670		0.001327
		0.002376	59.1	1.4	69.81		70				-1410		4.06
63	0.151	0.091	0.605	8.4	8377		262	0.06814	0.070393	0.000097	8654		0.070393
23	60.4	12.34	292.8	-1.3	-2173		-386	0.017679	-0.000559	-0.000143	437680		0.005278
	-15	14.801	674.6	3.1	-136		14274	-0.001105	-0.001105	-176.07	796		0.001457
		0.002375	59.3	1.9	69.03		69				-1437		3.95
63	0.15	0.091	0.607	9.4	9585		183	0.077394	0.080009	0.000067	9909		0.080009
24	60.2	12.28	293.8	-1.6	-2513		-427	0.020293	-0.00043	-0.000157	512259		0.006111
	-15	14.803	676.9	3.4	-183		16650	-0.001474	-0.001474	-204.61	931		0.001571
		0.002377	59.1	2.4	68.2		53				-1462		3.8
63	0.151	0.091	0.605	10.6	10797		245	0.087803	0.090769	0.000091	11162		0.090769
25	60.4	12.37	292.7	-1.8	-2831		-307	0.023021	-0.000488	-0.000113	592137		0.007141
	-15	14.803	674.3	3.8	-210		19318	-0.001711	-0.001711	-228.95	1077		0.001753
		0.002378	58.9	2.9	67.47		60				-1475		3.63

RUN POINT	V/OR VKTS ALFS,U	MTUN QPSF BARO RHO	MTP RPM OMEG*R TTEMPF	THETA A1 B1 CONING	LIFTH,C DRAGH,C SIDEH,C SKANGLE	PITCHH,S ROLLH,S TORQ,C HFORCE	CLRH/S CXRH/S CYRH/S	CLRHS/S CXRHS/S CYRHS/S	CMYHS/S CMXHS/S FE	THRUST POW HP VD	CTH/S CP/S CPO/S L/DR
63	0.151	0.092	0.605	11.7	12005	324	0.097567	0.100854	0.00012	12410	0.100854
26	60.5	12.41	292.8	-2.1	-3143	-375	0.025544	-0.000579	-0.000139	679942	0.008192
	-15	14.802	674.6	4	-278	22175	-0.002257	-0.002257	-253.35	1236	0.001972
		0.002377	58.9	3.4	66.74	71				-1483	3.42
63	0.152	0.092	0.604	12.8	13160	286	0.10708	0.110735	0.000106	13609	0.110735
27	60.6	12.44	292.6	-2.5	-3468	-379	0.028217	-0.000459	-0.00014	770894	0.009305
	-15	14.802	674.1	4.3	-340	25159	-0.002764	-0.002764	-278.84	1402	0.002197
		0.002378	58.8	3.9	66.05	56				-1501	3.23
21	0.151	0.092	0.606	3.1	3760	208	0.030472	0.030861	0.000077	3808	0.030861
23	60.1	12.37	291.6	-0.7	-605	-129	0.004907	-0.000464	-0.000047	169600	0.002046
	-10.01	14.776	671.8	1.7	-51	5554	-0.000414	-0.000414	-48.97	308	0.001075
		0.002404	52.3	2.3	77.19	57				-734	3.53
21	0.151	0.091	0.606	4.1	4878	238	0.039591	0.040117	0.000088	4942	0.040117
24	60	12.33	291.2	-0.8	-800	-88	0.006491	-0.000489	-0.000033	204206	0.002471
	-10.01	14.775	670.9	1.9	-69	6696	-0.000562	-0.000562	-64.84	371	0.001103
		0.002407	51.7	2.8	76.37	60				-804	4.01
21	0.151	0.092	0.607	5.2	6158	246	0.049692	0.050374	0.00009	6242	0.050374
25	60	12.37	291.9	-1	-1025	-21	0.008275	-0.000489	-0.000008	250019	0.003
	-10.01	14.775	672.5	2.3	-88	8179	-0.000712	-0.000712	-82.93	455	0.00114
		0.002409	51.2	3.3	75.46	61				-857	4.27
21	0.151	0.092	0.607	6.1	7224	250	0.058381	0.059195	0.000092	7325	0.059195
26	60.1	12.38	291.9	-1	-1212	24	0.009797	-0.0005	0.000009	291559	0.003504
	-10.01	14.775	672.5	2.6	-114	9538	-0.000918	-0.000918	-97.95	530	0.001181
		0.002406	51.9	3.8	74.71	62				-887	4.35

RUN POINT	V/OR VKTS ALFS,U	MTUN QPSF BARO RHO	MTIP RPM OMEG*R TTEMPF	THETA A1 B1 CONING	LIFTH,C DRAGH,C SIDEH,C SKANGLE	PITCHH,S ROLLH,S TORQ,C HFORCE	CLRH/S CXRH/S CYRH/S	CLRHS/S CXRHS/S CYRHS/S	CMYHS/S CMXHS/S FE	THRUST POW HP VD	CTH/S CP/S CPO/S L/DR
21	0.151	0.091	0.605	7.2	8617	388	0.070126	0.071094	0.000143	8736	0.071094
27	60.1	12.35	291	-1.4	-1439	-149	0.011708	-0.000659	-0.000055	350206	0.004251
	-10.01	14.775	670.4	2.9	-183	11492	-0.001491	-0.001491	-116.44	637	0.001264
		0.002404	52.3	4.4	73.74	81				-901	4.28
21	0.152	0.092	0.602	8.3	9624	239	0.079015	0.080148	0.000089	9762	0.080148
28	60.1	12.38	289.5	-1.7	-1637	-182	0.013441	-0.000498	-0.000068	402153	0.00495
	-10.01	14.774	667	3.3	-226	13265	-0.001856	-0.001856	-132.29	731	0.001371
		0.002407	51.5	4.9	73.07	61				-930	4.13
21	0.152	0.092	0.604	9.2	10766	287	0.087855	0.089108	0.000107	10920	0.089108
29	60.1	12.4	290.5	-1.9	-1826	-172	0.014901	-0.000597	-0.000064	462440	0.005638
	-10.01	14.774	669.3	3.5	-273	15201	-0.002232	-0.002232	-147.31	841	0.001475
		0.002405	51.9	5.4	72.32	73				-938	3.95
21	0.152	0.092	0.604	10.2	11797	301	0.096446	0.097821	0.000112	11965	0.097821
30	60.1	12.4	290.2	-2.2	-2001	-192	0.016358	-0.000655	-0.000072	521705	0.00638
	-10.01	14.774	668.6	3.8	-330	17167	-0.002697	-0.002697	-161.41	949	0.001605
		0.002406	51.8	5.8	71.64	80				-945	3.76
21	0.154	0.092	0.595	2.3	2564	31	0.021538	0.021766	0.000012	2591	0.021766
31	60.1	12.4	286.3	-0.3	-381	-7	0.003197	-0.000595	-0.000003	133728	0.001703
	-10.01	14.774	659.6	1.4	-31	4460	-0.00026	-0.00026	-30.7	243	0.001098
		0.002406	51.8	1.8	78.08	71				-549	2.74
22	0.151	0.092	0.607	2.3	2811	147	0.022741	0.023013	0.000054	2845	0.023013
12	60.4	12.35	293.3	-0.3	-439	-28	0.003553	-0.000446	-0.00001	145799	0.001746
	-9.99	14.761	675.7	1.4	-22	4747	-0.000174	-0.000174	-35.55	265	0.001082
		0.00238	56.7	1.8	77.9	55				-629	2.83

RUN POINT	V/OR VKTS ALFS,U	MTUN QPSF BARO RHO	MTP RPM OMEG*R TTEMPF	THETA A1 B1 CONING	LIFTH,C DRAGH,C SIDEH,C SKANGLE	PTCHH,S ROLLH,S TORQ,C HFORCE	CLRH/S CXRH/S CYRH/S	CLRHS/S CXRHS/S CYRHS/S	CMYHS/S CMXHS/S FE	THRUST POW HP VD	CTH/S CP/S CPO/S L/DR
22	0.151	0.091	0.604	3	3664	302	0.029909	0.030279	0.000112	3709	0.030279
13	60.3	12.34	292	-0.5	-581	-17	0.004742	-0.000518	-0.000006	166470	0.00202
	-9.99	14.762	672.7	1.5	-31	5444	-0.00025	-0.00025	-47.06	303	0.001081
		0.00238	56.8	2.2	77.27	63				-717	3.48
22	0.151	0.092	0.607	4	4904	270	0.039674	0.040197	0.000099	4969	0.040197
14	60.4	12.37	293.3	-0.7	-801	-95	0.006481	-0.0005	-0.000035	206014	0.002466
	-9.99	14.762	675.7	1.8	-59	6707	-0.000479	-0.000479	-64.79	375	0.001098
		0.00238	56.7	2.7	76.38	62				-807	4.02
22	0.151	0.092	0.606	5	6022	260	0.048909	0.049579	0.000096	6105	0.049579
15	60.4	12.37	292.7	-1	-1002	-142	0.008137	-0.000471	-0.000053	244645	0.002946
	-9.99	14.762	674.3	2.2	-90	7982	-0.000734	-0.000734	-81.03	445	0.001125
		0.002381	56.6	3.2	75.58	58				-858	4.31
22	0.151	0.092	0.606	6.1	7287	332	0.059131	0.059949	0.000122	7388	0.059949
16	60.4	12.37	292.9	-1.2	-1218	-135	0.009883	-0.000525	-0.00005	294182	0.003537
	-9.99	14.761	674.8	2.6	-125	9591	-0.001014	-0.001014	-98.5	535	0.001179
		0.00238	56.8	3.8	74.69	65				-888	4.37
22	0.151	0.092	0.607	7	8391	275	0.067967	0.068933	0.000101	8510	0.068933
17	60.4	12.39	293.1	-1.3	-1421	-152	0.011513	-0.000452	-0.000056	342945	0.004114
	-9.99	14.761	675.3	2.9	-164	11173	-0.001331	-0.001331	-114.76	624	0.001231
		0.002381	56.6	4.2	73.93	56				-918	4.32
22	0.152	0.092	0.604	8.2	9677	323	0.079007	0.08013	0.00012	9815	0.08013
18	60.4	12.38	291.9	-1.7	-1639	-199	0.01338	-0.000529	-0.000074	404779	0.004914
	-9.99	14.76	672.5	3.3	-227	13242	-0.001849	-0.001849	-132.43	736	0.001346
		0.002381	56.4	4.8	73.05	65				-931	4.15



RUN POINT	V/OR VKTS ALFS,U	MTUN QPSF BARO RHO	MTIP RPM OMEG*R TTEMPF	THETA A1 B1 CONING	LIFTH,C DRAGH,C SIDEH,C SKANGLE	PITCHH,S ROLLH,S TORQ,C HFORCE	CLRH/S CXRH/S CYRH/S	CLRHS/S CXRHS/S CYRHS/S	CMYHS/S CMXHS/S FE	THRUST POW HP VD	CTH/S CP/S CPO/S LDR
22	0.151	0.092	0.605	9.2	10909	351	0.0889	0.090163	0.00013	11064	0.090163
19	60.4	12.38	292.2	-2	-1847	-277	0.015049	-0.000601	-0.000103	470973	0.005702
	-9.99	14.759	673.2	3.5	-296	15392	-0.002413	-0.002413	-149.22	856	0.001471
		0.002381	56.5	5.3	72.23	74				-941	3.93
22	0.152	0.092	0.605	10.3	12123	304	0.098936	0.100358	0.000113	12298	0.100358
20	60.4	12.38	292	-2.3	-2064	-192	0.016847	-0.000571	-0.000071	544495	0.006605
	-9.99	14.759	672.7	3.9	-341	17807	-0.00278	-0.00278	-166.82	990	0.001636
		0.002381	56.5	5.9	71.44	70				-955	3.7
22	0.151	0.092	0.606	11.5	13365	251	0.108656	0.110253	0.000093	13561	0.110253
21	60.4	12.39	292.5	-2.7	-2300	-236	0.018698	-0.000434	-0.000087	633937	0.007648
	-9.99	14.758	673.9	4.3	-421	20696	-0.003421	-0.003421	-185.69	1153	0.001901
		0.002381	56.3	6.4	70.65	53				-973	3.41
22	0.151	0.092	0.606	12.7	14484	398	0.117765	0.119478	0.000147	14694	0.119478
22	60.4	12.39	292.5	-3	-2480	-251	0.020166	-0.000569	-0.000093	735748	0.008878
	-9.99	14.76	673.9	4.6	-495	24020	-0.004022	-0.004022	-200.25	1338	0.002398
		0.002381	56.4	6.8	69.94	70				-973	3.06
24	0.151	0.091	0.605	2.3	4993	158	0.040738	0.04074	0.000059	4994	0.04074
7	60.2	12.23	292.6	-1.2	-91	-317	0.000744	-0.000671	-0.000118	133325	0.001614
	-1.99	14.722	674.1	1.5	-71	4351	-0.000582	-0.000582	-7.46	242	0.001089
		0.002372	57.1	2.8	84.2	82				68	4.09
24	0.15	0.091	0.606	4.3	7423	103	0.06046	0.060479	0.000038	7425	0.060479
8	60.1	12.21	292.9	-1.4	-193	-203	0.001574	-0.000527	-0.000075	188213	0.002272
	-1.99	14.722	674.8	2.5	-127	6136	-0.001036	-0.001036	-15.82	342	0.001126
		0.00237	57.3	3.9	82.37	65				-38	4.47

RUN POINT	V/OR VKTS ALFS,U	MTUN QPSF BARO RHO	MTIP RPM OMEG*R TTEMPF	THETA		LIFTH,C DRAGH,C SIDEH,C CONING	PITCHH,S ROLLH,S TORQ,C HFORCE	CLRH/S CXRH/S CYRH/S	CLRHS/S CXRHS/S CYRHS/S	CMYHS/S CMXHS/S FE	THRUST		CTH/S CP/S CPO/S LDR
				A1	B1						POW	HP	VD
24	0.15	0.091	0.607	6.4		9824	64	0.07972	0.079756	0.000023	9828		0.079756
9	60.2	12.23	293.3	-1.8		-301	-162	0.002441	-0.000328	-0.00006	266321		0.003198
	-1.99	14.72	675.7	3.3		-209	8671	-0.001699	-0.001699	-24.6	484		0.00125
		0.002373	56.7	5		80.62	40				-96		4.23
24	0.151	0.091	0.605	7.3		10980	363	0.089581	0.089614	0.000135	10984		0.089614
10	60.2	12.24	292.5	-2.1		-306	-316	0.002499	-0.000614	-0.000117	303611		0.003676
	-1.99	14.722	673.9	3.4		-298	9912	-0.002428	-0.002428	-25.02	552		0.001308
		0.002373	56.7	5.5		79.79	75				-88		4.09
24	0.151	0.091	0.605	8.5		12307	326	0.100388	0.10043	0.000121	12312		0.10043
11	60.2	12.25	292.5	-2.4		-364	-270	0.002965	-0.000522	-0.0001	363608		0.004401
	-1.99	14.722	673.9	3.9		-358	11871	-0.002921	-0.002921	-29.67	661		0.001454
		0.002374	56.6	6.1		78.85	64				-107		3.83
24	0.15	0.091	0.609	9.5		13592	329	0.109522	0.109572	0.000121	13599		0.109572
12	60.2	12.26	294.4	-2.6		-414	-162	0.003335	-0.00047	-0.000059	432263		0.005135
	-1.99	14.721	678.2	4.2		-406	14021	-0.003267	-0.003267	-33.76	786		0.001643
		0.002372	56.9	6.5		77.96	58				-120		3.54
24	0.151	0.091	0.605	10.7		14664	444	0.11197	0.1119757	0.000165	14671		0.1119757
13	60.3	12.29	292.5	-3		-459	-216	0.003745	-0.000414	-0.00008	505069		0.006118
	-1.99	14.721	673.9	4.6		-491	16489	-0.004011	-0.004011	-37.32	918		0.002005
		0.002372	56.9	7		77.25	51				-130		3.26
28	0.149	0.091	0.61	2.3		7288	158	0.058353	0.058629	0.000058	7323		0.058629
7	60.2	12.23	295.4	-1.3		714	-58	-0.00572	-0.000612	-0.000021	85400		0.001005
	5	14.761	680.6	1.7		-101	2761	-0.000808	-0.000808	58.4	155		0.001005
		0.002371	58.7	3.9		89.33	76				715		4.69

RUN POINT	V/OR VKTS	MTUN QPSF	MTIP RPM	THETA		LIFTH,C DRAGH,C	PITCHH,S ROLLH,S	CLRH/S CXRH/S	CLRHS/S CXRRHS/S	CMYHS/S CMXHS/S	THRUST		CTH/S CP/S
				A1	B1						POW	HP	
	ALFS,U	BARO	OMEG*R	CONING	SKANGLE		TORQ,C	CYRH/S	CYRHS/S	FE	VD	L/DR	
		RHO	TTEMPF			HFORCE							
28	0.151	0.091	0.604	3.4	8549	197		0.069932	0.070249	0.000073	8588		0.070249
8	60.2	12.24	292.2	-1.6	818	-38		-0.006694	-0.000574	-0.000014	98942		0.001202
	5	14.761	673.2	2.1	-142	3233		-0.001165	-0.001165	66.85	180		0.001001
		0.002372	58.5	4.6	88.36	70					684		4.77
28	0.15	0.091	0.606	4.4	9850	317		0.079944	0.080313	0.000117	9895		0.080313
9	60.2	12.25	293.3	-1.8	951	-76		-0.00772	-0.000723	-0.000028	119835		0.001439
	5	14.761	675.7	2.3	-190	3902		-0.001542	-0.001542	77.64	218		0.001011
		0.002372	58.3	5.1	87.36	89					676		4.62
28	0.15	0.091	0.607	5.3	11022	279		0.089215	0.089612	0.000103	11071		0.089612
10	60.2	12.25	293.7	-2	1044	-150		-0.008453	-0.000645	-0.000055	146116		0.001748
	5	14.761	676.6	2.7	-250	4751		-0.002023	-0.002023	85.23	266		0.001036
		0.002372	58.3	5.7	86.46	80					655		4.44
28	0.151	0.091	0.605	6.5	12320	296		0.100526	0.100962	0.00011	12373		0.100962
11	60.2	12.26	292.5	-2.3	1152	-124		-0.009398	-0.0006	-0.000046	180393		0.002184
	5	14.761	673.9	3.2	-312	5889		-0.002544	-0.002544	93.92	328		0.001097
		0.002373	58.2	6.3	85.47	74					640		4.21
28	0.151	0.091	0.605	7.5	13408	358		0.109231	0.109708	0.000132	13466		0.109708
12	60.3	12.27	292.7	-2.5	1256	-103		-0.010235	-0.000676	-0.000038	215890		0.002608
	5	14.762	674.3	3.5	-366	7043		-0.002978	-0.002978	102.36	393		0.001193
		0.002373	58.1	6.8	84.66	83					635		3.97
28	0.151	0.091	0.604	8.5	14559	294		0.118817	0.119313	0.000109	14620		0.119313
13	60.2	12.26	292.5	-2.8	1333	-139		-0.010876	-0.000479	-0.000052	264189		0.0032
	5	14.763	673.9	3.8	-445	8625		-0.00363	-0.00363	108.67	480		0.001341
		0.002372	58.3	7.3	83.79	59					617		3.7

RUN POINT	V/OR VKTS ALFS,U	MTUN QPSF BARO RHO	MTIP RPM OMEG*R TTEMPF	THETA A1 B1 CONING	LIFTH,C DRAGH,C SIDEH,C SKANGLE	PITCHH,S ROLLH,S TORQ,C HFORCE	CLRH/S CXRH/S CYRH/S	CLRHS/S CXRHS/S CYRHS/S	CMYHS/S CMXHS/S FE	THRUST POW HP VD	CTH/S CPS CPO/S LDR
28	0.151	0.091	0.606	7.6	13558	281	0.109997	0.110459	0.000104	13615	0.110459
14	60.3	12.27	293.3	-2.7	1245	-240	-0.010102	-0.000476	-0.000089	224270	0.002693
	5	14.764	675.7	3.6	-409	7302	-0.003322	-0.003322	101.45	408	0.001206
		0.002373	58.1	6.8	84.55	59				623	3.93
30	0.15	0.091	0.605	2.3	8469	180	0.069349	0.070559	0.000067	8616	0.070559
12	60	12.14	292.5	-1.6	1592	-65	-0.013034	-0.000782	-0.000024	24639	0.000299
	10.01	14.706	673.9	1.7	-172	804	-0.001409	-0.001409	131.12	45	0.001063
		0.002364	58.1	4.7	93.23	95				1222	4.62
30	0.15	0.091	0.606	3.2	9652	212	0.078772	0.080138	0.000079	9819	0.080138
13	60.1	12.15	293	-1.7	1808	-44	-0.014758	-0.000841	-0.000016	32132	0.000388
	10.01	14.706	675	2.1	-202	1047	-0.001646	-0.001646	148.84	58	0.00106
		0.002364	58.1	5.3	92.27	103				1207	4.54
30	0.15	0.091	0.605	4.1	10784	125	0.08825	0.089748	0.000047	10967	0.089748
14	60.1	12.16	292.6	-1.9	1997	-69	-0.016344	-0.000756	-0.000026	44306	0.000538
	10.01	14.706	674.1	2.3	-242	1446	-0.001977	-0.001977	164.24	81	0.001061
		0.002364	58.1	5.8	91.35	92				1186	4.43
30	0.151	0.091	0.604	5.1	11972	237	0.098125	0.099822	0.000088	12179	0.099822
15	60.1	12.16	292.3	-2	2240	-93	-0.018356	-0.001021	-0.000035	56212	0.000684
	10.01	14.707	673.4	2.4	-287	1836	-0.00235	-0.00235	184.17	102	0.001057
		0.002365	57.9	6.4	90.38	125				1189	4.28
30	0.15	0.091	0.606	6.1	13332	246	0.108831	0.110732	0.000091	13565	0.110732
16	60.1	12.16	292.8	-2.2	2507	-105	-0.020465	-0.001236	-0.000039	78974	0.000956
	10.01	14.708	674.6	2.7	-341	2576	-0.002783	-0.002783	206.17	144	0.001083
		0.002367	57.6	7	89.28	151				1187	4.06

RUN POINT	V/OR VKTS ALFS,U	MTUN QPSF BARO RHO	MTP RPM OMEG* R	THETA A1 B1 CONING	LIFTH,C DRAGH,C SIDEH,C SKANGLE	PITCHH,S ROLLH,S TORQ,C HFORCE	CLRH/S CXRH/S CYRH/S	CLRHS/S CXRHS/S CYRHS/S	CMYHS/S CMXHS/S FE	THRUST POW HP VD	CTH/S CP/S CPO/S L/DR
30	0.15	0.091	0.606	7.1	14416	58	0.117396	0.119384	0.000021	14660	0.119384
17	59.9	12.11	293.1	-2.4	2667	-78	-0.021716	-0.00098	-0.000029	109456	0.00132
	10.01	14.711	675.3	3.1	-387	3566	-0.003151	-0.003151	220.23	199	0.001131
		0.002368	57.5	7.5	88.36	120				1162	3.85
22	0.201	0.121	0.604	2.2	1717	152	0.014084	0.01417	0.000056	1727	0.01417
23	80	21.66	291.5	-0.2	-211	-151	0.001727	-0.000742	-0.000056	127389	0.001556
	-9.99	14.76	671.6	1.4	-16	4173	-0.000129	-0.000129	-9.72	232	0.001172
		0.002376	56.1	1.3	79.27	91				233	2.34
22	0.2	0.121	0.606	3.7	3633	23	0.029578	0.029925	0.000009	3676	0.029925
24	80	21.67	292.6	-0.3	-564	-58	0.004589	-0.000612	-0.000021	185754	0.002243
	-9.99	14.76	674.1	2.2	-33	6062	-0.000265	-0.000265	-26.01	338	0.001161
		0.002377	56.1	2.2	78.45	75				-675	4.48
22	0.201	0.122	0.605	4.7	4772	93	0.038981	0.039479	0.000034	4833	0.039479
25	80.1	21.71	292.1	-0.5	-768	-121	0.006275	-0.000582	-0.000045	223753	0.002716
	-9.99	14.762	673	2.6	-57	7315	-0.000463	-0.000463	-35.4	407	0.001173
		0.002377	56.1	2.7	77.97	71				-858	5.38
22	0.201	0.122	0.605	5.7	6066	122	0.049665	0.050337	0.000045	6148	0.050337
26	80.1	21.74	291.7	-0.7	-1003	-114	0.008212	-0.000528	-0.000042	272976	0.003326
	-9.99	14.762	672	3.2	-84	8936	-0.000685	-0.000685	-46.15	496	0.001215
		0.002378	55.9	3.3	77.43	64				-985	5.97
22	0.201	0.122	0.606	6.7	7229	171	0.058867	0.059689	0.000063	7330	0.059689
27	80.1	21.74	292.5	-1	-1214	-269	0.009882	-0.00048	-0.0001	323537	0.00391
	-9.99	14.761	673.9	3.6	-134	10563	-0.001089	-0.001089	-55.83	588	0.001281
		0.002378	55.9	3.8	76.95	59				-1060	6.13

RUN POINT	V/OR VKTS ALFS,U	MTUN QPSF BARO RHO	MTIP RPM OMEG*R TTEMPF	THETA A1 B1 CONING	LIFTH,C DRAGH,C SIDEH,C SKANGLE	PITCHH,S ROLLH,S TORQ,C HFORCE	CLRH/S CXRH/S CYRH/S	CLRHS/S CXRHS/S CYRHS/S	CMYHS/S CMXHS/S FE	THRUST POW HP VD	CTH/S CP/S CPO/S L/DR
23	0.2	0.121	0.606	2.2	1786	250	0.014629	0.014705	0.000093	1796	0.014705
5	79.9	21.43	293.1	-0.3	-210	-245	0.00172	-0.000846	-0.000091	129146	0.001566
	-10	14.719	675.3	1.3	-3	4208	-0.000022	-0.000022	-9.8	235	0.001182
		0.002355	59.1	1.3	79.23	103				213	2.39
23	0.2	0.121	0.606	3.6	3435	174	0.028089	0.028391	0.000065	3472	0.028391
6	80	21.46	293.3	-0.3	-513	-114	0.004196	-0.000745	-0.000042	178607	0.002161
	-10	14.719	675.7	2	-20	5815	-0.000163	-0.000163	-23.91	325	0.001175
		0.002355	59.1	2.1	78.51	91				-601	4.24
23	0.2	0.121	0.606	5.8	6103	170	0.04991	0.050584	0.000063	6185	0.050584
7	80.1	21.49	293.4	-0.8	-1009	-165	0.008251	-0.000541	-0.000061	276826	0.003349
	-10	14.72	675.9	3.2	-82	9010	-0.00067	-0.00067	-46.95	503	0.001233
		0.002353	59.5	3.2	77.38	66				-991	5.87
23	0.2	0.121	0.606	7.8	8482	209	0.069274	0.07028	0.000077	8605	0.07028
8	80.1	21.5	293.6	-1.3	-1451	-128	0.011855	-0.000354	-0.000047	385302	0.004652
	-10	14.719	676.4	4.2	-155	12532	-0.00127	-0.00127	-67.51	701	0.001385
		0.002353	59.5	4.2	76.38	43				-1130	6.06
23	0.2	0.121	0.606	9.9	10859	163	0.088867	0.090233	0.000061	11026	0.090233
9	80.1	21.51	293.4	-1.9	-1912	-182	0.015645	-0.000025	-0.000068	517126	0.006261
	-10	14.719	675.9	5.1	-269	16831	-0.002199	-0.002199	-88.87	940	0.001654
		0.002351	59.8	5.2	75.4	3				-1222	5.68
23	0.2	0.121	0.607	10.8	12163	610	0.099079	0.100477	0.000226	12335	0.100477
10	80.2	21.56	294	-1.9	-2052	46	0.016717	-0.000742	0.000017	583023	0.007012
	-10	14.719	677.3	5.1	-302	18937	-0.002459	-0.002459	-95.18	1060	0.001834
		0.002353	59.5	5.8	74.89	91				-1185	5.4

RUN POINT	V/OR VKTS	MTUN QPSF	MTIP RPM	THETA A1	LIFTH,C DRAGH,C	PITCHH,S ROLLH,S	CLRH/S CXRH/S	CLRHS/S CXRHS/S	CMYHS/S CMXHS/S	THRUST POW	CTH/S CP/S
	ALFS,U	BARO	OMEG*R	B1	SIDEH,C	TORQ,C	CYRH/S	CYRHS/S	FE	HP	CPO/S
		RHO	TTEMPF	CONING	SKANGLE	HFORCE				VD	L/DR
23	0.199	0.121	0.608	12	13350	402	0.10833	0.109954	0.000148	13550	0.109954
11	80.2	21.54	294.5	-2.5	-2320	-91	0.018827	-0.00027	-0.000034	676195	0.008087
	-10	14.719	678.5	5.7	-400	21926	-0.003247	-0.003247	-107.71	1229	0.002132
		0.002354	59.3	6.3	74.41	33				-1239	4.99
23	0.201	0.121	0.605	12.8	13881	204	0.114081	0.115883	0.000076	14100	0.115883
12	80.2	21.57	292.6	-3.1	-2477	-292	0.020357	0.000238	-0.000109	728853	0.008886
	-10	14.72	674.1	6.1	-488	23787	-0.004009	-0.004009	-114.83	1325	0.002374
		0.002354	59.2	6.5	74.2	-29				-1282	4.78
23	0.201	0.121	0.604	13.4	14412	461	0.118494	0.120308	0.000172	14633	0.120308
13	80.2	21.55	292.5	-3.1	-2531	-168	0.02081	-0.000082	-0.000063	785352	0.009582
	-10	14.721	673.9	6.3	-520	25640	-0.004279	-0.004279	-117.45	1428	0.002788
		0.002355	59.1	6.8	73.99	10				-1264	4.4
23	0.201	0.121	0.605	8.7	9547	282	0.078435	0.079573	0.000105	9685	0.079573
14	80.1	21.55	292.5	-1.4	-1633	-76	0.013417	-0.000435	-0.000028	437470	0.005334
	-10.02	14.724	673.9	4.4	-210	14282	-0.001724	-0.001724	-75.77	795	0.001495
		0.002356	58.9	4.8	75.93	53				-1156	5.96
25	0.2	0.121	0.607	2.3	4986	61	0.040786	0.040783	0.000023	4986	0.040783
5	79.8	21.49	292.4	-0.8	-77	-214	0.000631	-0.000793	-0.000079	130107	0.00158
	-2	14.645	673.6	2	-63	4249	-0.000515	-0.000515	-3.59	237	0.001143
		0.002368	53.7	2.8	85.82	97				293	5.61
25	0.2	0.121	0.606	3.1	5992	118	0.049284	0.049286	0.000044	5992	0.049286
6	79.8	21.47	291.6	-0.8	-112	-219	0.000918	-0.000803	-0.000082	146145	0.001789
	-2	14.646	671.8	2.4	-78	4786	-0.000641	-0.000641	-5.2	266	0.001152
		0.002369	53.7	3.2	85.39	98				197	6.15

RUN POINT	V/OR VKTS ALFS,U	MTUN QPSF BARO RHO	MTIP RPM OMEG*R TTEMPF	THETA		LIFTH,C		PITCHH,S		CLRH/S		CLRH/S		CMYH/S		THRUST		CTH/S	
				A1	B1	DRAGH,C	SIDEH,C	ROLLH,S	TORQ,C	CXRH/S	CYRH/S	CXRH/S	CYRH/S	CMXH/S	FE	POW	HP	CP/S	CPO/S
				CONING		SKANGLE		HFORCE								VD		L/DR	
25	0.201	0.121	0.604	4.1		7149		-97		0.059178	0.059193	0.059193		-0.000037		7151		0.059193	
7	79.8	21.5	290.6	-1		-176		-328		0.001456	-0.000611	-0.000611		-0.000123		170855		0.002112	
	-2	14.647	669.5	3.2		-106		5614		-0.000881	-0.000881	-0.000881		-8.18		311		0.001169	
		0.00237	53.5	3.8		84.89		74								93		6.54	
25	0.2	0.121	0.606	5.2		8539		107		0.070145	0.070165	0.070165		0.00004		8541		0.070165	
8	79.8	21.47	291.7	-1.2		-216		-358		0.001775	-0.000674	-0.000674		-0.000134		202447		0.002475	
	-2	14.648	672	3.6		-124		6627		-0.001019	-0.001019	-0.001019		-10.07		368		0.0012	
		0.00237	53.5	4.4		84.28		82								39		6.63	
25	0.201	0.121	0.605	6.2		9649		81		0.07962	0.079651	0.079651		0.00003		9653		0.079651	
9	79.8	21.49	291.1	-1.5		-274		-371		0.002262	-0.000518	-0.000518		-0.000139		234398		0.002884	
	-2	14.649	670.6	4		-217		7689		-0.001792	-0.001792	-0.001792		-12.76		426		0.001249	
		0.002369	53.7	4.9		83.81		63								-14		6.58	
25	0.201	0.121	0.605	7.2		10994		108		0.090666	0.090703	0.090703		0.000041		10998		0.090703	
10	79.8	21.49	291.3	-1.6		-320		-222		0.002637	-0.000528	-0.000528		-0.000083		274974		0.003379	
	-2	14.649	671.1	4.5		-268		9014		-0.002211	-0.002211	-0.002211		-14.88		500		0.001318	
		0.002367	54.1	5.5		83.24		64								-46		6.39	
25	0.201	0.121	0.604	8.4		12178		81		0.100567	0.100619	0.100619		0.00003		12185		0.100619	
11	79.9	21.5	291.1	-2		-393		-314		0.003247	-0.000264	-0.000264		-0.000118		325950		0.004013	
	-2	14.65	670.6	5.1		-352		10693		-0.002906	-0.002906	-0.002906		-18.29		593		0.001479	
		0.002367	54.1	6		82.74		32								-90		6.01	
25	0.201	0.121	0.605	9.4		13359		242		0.109952	0.110008	0.110008		0.000091		13366		0.110008	
12	79.8	21.48	291.7	-2.3		-429		-314		0.003527	-0.000312	-0.000312		-0.000118		380329		0.004658	
	-2	14.651	672	5.4		-437		12451		-0.003599	-0.003599	-0.003599		-19.95		692		0.001696	
		0.002365	54.5	6.6		82.23		38								-103		5.58	



RUN POINT	V/OR VKTS	MTUN QPSF	MTP RPM	THETA A1	LIFTH,C DRAGH,C	PITCHH,S ROLLH,S	CLRH/S CXRH/S	CLRHS/S CXRHS/S	CMYHS/S CMXHS/S	THRUST POW	CTH/S CP/S
	ALFS,U	BARO	OMEG*R	B1	SIDEH,C	TORQ,C	CYRH/S	CYRHS/S	FE	HP	CPO/S
		RHO	TTEMPF	CONING	SKANGLE	HFORCE				VD	L/DR
25	0.201	0.122	0.605	10.4	14292	131	0.117688	0.11777	0.000049	14302	0.11777
13	79.9	21.52	291.7	-2.8	-533	-314	0.004388	0.000278	-0.000118	449887	0.005513
	-2	14.65	672	6.1	-510	14728	-0.004198	-0.004198	-24.76	818	0.002052
		0.002364	54.7	6.9	81.85	-34				-156	5.1
28	0.2	0.121	0.606	2.2	7721	194	0.062979	0.063276	0.000072	7757	0.063276
15	80	21.56	292.9	-1.1	755	-78	-0.006161	-0.000649	-0.000029	50198	0.000607
	5	14.764	674.8	2.4	-155	1637	-0.001262	-0.001262	35.03	91	0.001098
		0.002367	58.1	4.3	91.6	80				1055	6.85
28	0.2	0.121	0.605	2.9	8433	129	0.068933	0.069245	0.000048	8472	0.069245
16	80	21.58	292.6	-1.2	807	-80	-0.006593	-0.00056	-0.00003	55254	0.00067
	5	14.764	674.1	2.7	-180	1803	-0.001473	-0.001473	37.38	100	0.001104
		0.002367	58.1	4.6	91.29	69				1016	6.94
28	0.201	0.121	0.604	3.9	9730	235	0.07977	0.080135	0.000088	9775	0.080135
17	79.9	21.56	292.1	-1.3	935	-65	-0.007663	-0.000682	-0.000024	64268	0.000783
	5	14.765	673	3.1	-217	2101	-0.001776	-0.001776	43.35	117	0.001133
		0.002368	57.9	5.2	90.71	83				986	6.9
28	0.2	0.121	0.607	4.9	11045	266	0.089712	0.090119	0.000098	11095	0.090119
18	80	21.57	293.5	-1.5	1056	-97	-0.008581	-0.00073	-0.000036	80499	0.000967
	5	14.764	676.2	3.4	-266	2619	-0.002161	-0.002161	48.98	146	0.001172
		0.002367	58	5.8	90.13	90				958	6.68
28	0.2	0.121	0.605	5.9	12235	214	0.1001	0.100541	0.00008	12289	0.100541
19	80	21.58	292.5	-1.7	1153	-114	-0.009433	-0.000673	-0.000042	101346	0.00123
	5	14.764	673.9	4	-322	3309	-0.002631	-0.002631	53.42	184	0.001251
		0.002366	58.2	6.4	89.61	82				929	6.43



RUN POINT	V/OR VKTS ALFS,U	MTUN QPSF BARO RHO	MTIP RPM OMEG*R TTEMPF	THETA A1 B1 CONING	LIFTH,C DRAGH,C SIDEH,C SKANGLE	PITCHH,S ROLLH,S TORQ,C HFORCE	CLRH/S CXRH/S CYRH/S	CLRHS/S CXRHS/S CYRHS/S	CMYHS/S CMXHS/S FE	THRUST POW HP VD	CTH/S CP/S CPO/S L/DR
30	0.201	0.121	0.606	5.6	13307	88	0.108966	0.110792	0.000033	13530	0.110792
22	80.1	21.58	292.7	-1.8	2448	-36	-0.020049	-0.000804	-0.000013	-27403	-0.000333
	10.01	14.716	674.3	4	-368	-894	-0.003014	-0.003014	113.45	-50	0.001472
		0.002361	57.7	7.1	94.03	98				1617	5.93
30	0.201	0.121	0.604	6.6	14495	65	0.119282	0.121245	0.000024	14733	0.121245
23	80.1	21.59	291.9	-1.9	2642	-166	-0.02174	-0.000675	-0.000062	-8516	-0.000104
	10.01	14.717	672.5	4.4	-454	-279	-0.003732	-0.003732	122.34	-15	0.00162
		0.002362	57.5	7.8	93.49	82				1592	5.62
63	0.251	0.152	0.606	6.8	3702	181	0.030253	0.031099	0.000067	3806	0.031099
28	100.3	33.87	292.7	-0.3	-888	-309	0.007253	-0.000824	-0.000115	274674	0.003329
	-15	14.803	674.3	3.5	-4	8961	-0.000036	-0.000036	-26.21	499	0.001372
		0.002366	58.3	-0.2	73.99	101				-1308	5.03
63	0.252	0.152	0.604	7.7	4826	264	0.039711	0.040903	0.000099	4971	0.040903
29	100.4	33.95	291.7	-0.3	-1195	-218	0.009832	-0.000781	-0.000081	338681	0.004147
	-15	14.802	672	4	-16	11087	-0.000132	-0.000132	-35.19	616	0.001434
		0.002366	58.3	0.3	73.68	95				-1637	6
63	0.251	0.152	0.605	8.8	5984	-4	0.049002	0.050608	-0.000002	6180	0.050608
30	100.2	33.84	292.4	-0.5	-1546	-121	0.012658	-0.000456	-0.000045	416830	0.005067
	-15	14.803	673.6	4.8	-30	13613	-0.000242	-0.000242	-45.68	758	0.001531
		0.002366	58.3	0.8	73.36	56				-1899	6.51
63	0.251	0.152	0.604	9.8	7186	102	0.059062	0.061048	0.000038	7428	0.061048
31	100.2	33.82	291.8	-0.9	-1880	-227	0.015449	-0.000363	-0.000085	494426	0.006045
	-15	14.803	672.3	5.2	-73	16180	-0.000602	-0.000602	-55.58	899	0.001641
		0.002367	58.1	1.3	73.04	44				-2038	6.88

RUN POINT	V/OR VKTS ALFS,U	MTUN QPSF BARO RHO	MTP RPM OMEG*R TTEMPF	THETA A1 B1 CONING	LIFTH,C DRAGH,C SIDEH,C SKANGLE	PITCHH,S ROLLH,S TORQ,C HFORCE	CLRH/S CXRH/S CYRH/S	CLRH/S CXRH/S CYRH/S	CMYHS/S CMXHS/S FE	THRUST POW HP VD	CTH/S CP/S CPO/S L/DR
63	0.252	0.152	0.604	9.8	7192	111	0.059156	0.061144	0.000042	7434	0.061144
32	100.2	33.87	291.7	-0.9	-1881	-222	0.01547	-0.000367	-0.000083	494073	0.006047
	-15	14.802	672	5.2	-74	16174	-0.000613	-0.000613	-55.53	898	0.001633
		0.002367	58.1	1.3	73.04	45				-2039	6.92
63	0.251	0.152	0.605	10.9	8536	224	0.069905	0.072299	0.000083	8828	0.072299
33	100.2	33.84	292.3	-1.3	-2253	-239	0.018454	-0.000268	-0.000089	588202	0.007153
	-15	14.805	673.4	5.7	-119	19216	-0.000973	-0.000973	-66.58	1069	0.001792
		0.002367	58.1	1.8	72.68	33				-2146	6.97
63	0.251	0.152	0.606	11.8	9567	213	0.078063	0.080806	0.000079	9904	0.080806
34	100.3	33.92	292.8	-1.7	-2558	-369	0.020874	-0.000041	-0.000137	670669	0.008112
	-15	14.804	674.6	6.1	-181	21873	-0.001478	-0.001478	-75.42	1219	0.001966
		0.002368	57.9	2.3	72.41	5				-2228	6.81
63	0.251	0.152	0.606	12.9	10665	197	0.087075	0.090196	0.000073	11047	0.090196
35	100.3	33.96	292.7	-2.1	-2881	-278	0.023523	0.000185	-0.000103	762218	0.009229
	-15	14.805	674.3	6.6	-215	24867	-0.001757	-0.001757	-84.83	1386	0.002192
		0.002368	57.9	2.7	72.13	-23				-2296	6.59
23	0.249	0.151	0.607	4.6	3663	207	0.030004	0.03031	0.000077	3700	0.03031
15	99.9	33.37	293.5	-0.2	-535	18	0.004386	-0.000896	0.000007	207199	0.00251
	-10.01	14.725	676.2	2.9	-36	6741	-0.000291	-0.000291	-16.04	377	0.001282
		0.002347	59.2	2.2	78.97	109				-372	5.28
23	0.249	0.151	0.609	5.4	4503	-12	0.036687	0.037123	-0.000004	4556	0.037123
16	99.9	33.38	294.3	-0.3	-702	-16	0.005722	-0.000742	-0.000006	244617	0.00294
	-10.01	14.724	678	3.5	-51	7937	-0.000414	-0.000414	-21.04	445	0.001314
		0.002347	59.2	2.5	78.73	91				-676	6.02

RUN POINT	V/OR VKTS ALFS,U	MTUN QPSF BARO RHO	MTP RPM OMEG*R TTEMPF	THETA A1 B1 CONING	LIFTH,C DRAGH,C SIDEH,C SKANGLE	PITCHH,S ROLLH,S TORQ,C HFORCE	CLRH/S CXRH/S CYRH/S	CLRHS/S CXRHS/S CYRHS/S	CMYHS/S CMXHS/S FE	THRUST POW HP VD	CTH/S CP/S CPO/S LDR
23	0.251	0.151	0.604	6.7	6018	60	0.049715	0.050367	0.000023	6097	0.050367
17	99.9	33.39	292.3	-0.5	-981	-33	0.008104	-0.000661	-0.000012	309097	0.003792
	-10.01	14.724	673.4	4.2	-83	10098	-0.000684	-0.000684	-29.38	562	0.001393
		0.002347	59.3	3.2	78.31	80				-971	7.07
23	0.25	0.151	0.606	7.7	7236	14	0.059447	0.060275	0.000005	7336	0.060275
18	99.9	33.41	293	-0.8	-1213	-77	0.009969	-0.000516	-0.000029	370259	0.004507
	-10.01	14.723	675	4.8	-118	12067	-0.000967	-0.000967	-36.31	673	0.001487
		0.002349	58.9	3.7	77.98	63				-1129	7.37
23	0.251	0.151	0.603	8.6	8146	19	0.067668	0.068641	0.000007	8263	0.068641
19	100	33.43	291.4	-1	-1387	-56	0.01152	-0.000417	-0.000021	416746	0.005157
	-10.01	14.722	671.3	5.4	-145	13657	-0.001202	-0.001202	-41.48	758	0.00158
		0.002348	58.9	4.1	77.73	50				-1216	7.52
23	0.248	0.152	0.61	9.8	9631	124	0.078065	0.079208	0.000046	9772	0.079208
20	100	33.44	295	-1.5	-1655	-223	0.013411	-0.000362	-0.000082	503167	0.006001
	-10.01	14.722	679.6	5.8	-223	16288	-0.00181	-0.00181	-49.47	915	0.001753
		0.002348	58.9	4.7	77.33	45				-1307	7.26
23	0.25	0.152	0.606	10.9	10870	123	0.089243	0.090581	0.000046	11033	0.090581
21	100	33.44	293.1	-1.8	-1890	-187	0.015514	-0.000235	-0.00007	576949	0.007015
	-10.01	14.723	675.3	6.3	-274	18797	-0.002251	-0.002251	-56.5	1049	0.001946
		0.002349	58.9	5.2	76.99	29				-1374	7.11
23	0.25	0.151	0.605	12	12002	91	0.099024	0.100551	0.000034	12187	0.100551
22	100	33.42	292.4	-2.2	-2116	-267	0.01746	-0.000018	-0.0001	657111	0.008048
	-10.01	14.721	673.6	6.9	-353	21460	-0.002914	-0.002914	-63.31	1195	0.002211
		0.002348	58.9	5.7	76.69	2				-1432	6.75

RUN POINT	V/OR VKTS ALFS,U	MTUN QPSF BARO RHO	MTP RPM OMEG*R TTEMPF	THETA		LIFTH,C DRAGH,C SIDEH,C CONING SKANGLE	PITCHH,S		CLRH/S CXRH/S CYRH/S	CLRHS/S CXRHS/S CYRHS/S	CMYHS/S CMXHS/S FE	THRUST		C TH/S CP/S CPO/S L/DR
				A1	B1		ROLLH,S	TORQ,C				POW	HP	
23	0.251	0.152	0.604	13.2	12997	89	0.10748	0.109185	0.000034	13203	0.109185			
23	100.1	33.5	292	-2.8	-2324	-246	0.019221	0.000246	-0.000092	746626	0.009178			
	-10.01	14.722	672.7	7.5	-420	24417	-0.003474	-0.003474	-69.37	1358	0.002632			
		0.002349	58.7	6.2	76.43	-30				-1483	6.2			
23	0.25	0.152	0.607	14.5	13967	278	0.114301	0.11616	0.000103	14194	0.11616			
24	100	33.46	293.5	-3.6	-2530	-203	0.020706	0.000523	-0.000075	891517	0.01079			
	-10.01	14.724	676.2	8.2	-522	29006	-0.004274	-0.004274	-75.61	1621	0.003664			
		0.00235	58.7	6.5	76.16	-64				-1526	5.07			
25	0.25	0.152	0.607	2.2	4590	107	0.037793	0.037787	0.00004	4590	0.037787			
14	99.8	33.45	292.1	-0.4	-60	-76	0.00049	-0.000829	-0.000029	124989	0.001529			
	-2	14.65	673	2.5	-75	4086	-0.000617	-0.000617	-1.78	227	0.001193			
		0.002358	54.3	2.7	86.71	101				751	6.73			
25	0.252	0.152	0.604	3.5	6089	47	0.050658	0.050663	0.000018	6089	0.050663			
15	99.7	33.43	290.5	-0.5	-125	-19	0.00104	-0.000728	-0.000007	150233	0.001868			
	-2	14.651	669.3	3.4	-104	4938	-0.000869	-0.000869	-3.74	273	0.001224			
		0.002359	54.1	3.4	86.29	88				458	7.94			
25	0.251	0.152	0.605	4.5	7325	85	0.060608	0.060621	0.000032	7326	0.060621			
16	99.8	33.45	291.3	-0.7	-172	-71	0.001427	-0.000689	-0.000027	175301	0.002161			
	-2	14.651	671.1	3.9	-146	5747	-0.00121	-0.00121	-5.16	319	0.001256			
		0.002359	54.1	3.9	85.95	83				316	8.43			
25	0.252	0.152	0.603	5.5	8393	39	0.069951	0.069973	0.000015	8396	0.069973			
17	99.8	33.43	290.5	-0.9	-222	-96	0.001853	-0.000589	-0.000036	200640	0.002498			
	-2	14.651	669.3	4.5	-188	6595	-0.00157	-0.00157	-6.65	365	0.001305			
		0.002355	54.9	4.4	85.65	71				215	8.67			

RUN POINT	V/OR VKTS ALFS,U	MTUN QPSF BARO RHO	MTIP RPM OMEG*R TTEMPF	THETA A1 B1 CONING	LIFTH,C DRAGH,C SIDEH,C SKANGLE	PITCHH,S ROLLH,S TORQ,C HFORCE	CLRH/S CXRH/S CYRH/S	CLRHS/S CXRHS/S CYRHS/S	CMYHS/S CMXHS/S FE	THRUST POW HP VD	CTH/S CP/S CPO/S L/DR
25	0.251	0.152	0.605	6.6	9670	133	0.080127	0.080155	0.00005	9674	0.080155
18	99.8	33.4	291.4	-1.3	-264	-209	0.002184	-0.000614	-0.000079	235662	0.002909
	-2	14.651	671.3	5	-260	7723	-0.002156	-0.002156	-7.89	428	0.001404
		0.002354	55.1	5	85.29	74				143	8.52
25	0.25	0.152	0.607	7.7	10854	27	0.089435	0.089475	0.00001	10859	0.089475
19	99.9	33.46	292.1	-1.4	-331	-78	0.002725	-0.000398	-0.000029	278318	0.003408
	-2	14.65	673	5.7	-297	9099	-0.002444	-0.002444	-9.88	506	0.001531
		0.002356	54.7	5.5	84.96	48				66	8.22
25	0.251	0.152	0.604	8.7	12071	112	0.100333	0.100379	0.000042	12076	0.100379
20	99.8	33.43	290.8	-1.7	-371	-219	0.003081	-0.000423	-0.000083	322283	0.003999
	-2	14.65	670	6.2	-387	10583	-0.003215	-0.003215	-11.09	586	0.001727
		0.002357	54.6	6.1	84.62	51				26	7.82
25	0.251	0.152	0.604	9.2	12622	96	0.104786	0.104838	0.000036	12628	0.104838
21	99.8	33.4	291	-1.7	-401	-97	0.003329	-0.00033	-0.000037	347245	0.0043
	-2	14.65	670.4	6.5	-398	11395	-0.003302	-0.003302	-12.01	631	0.001829
		0.002356	54.7	6.3	84.47	40				0	7.6
29	0.25	0.151	0.606	2.8	8506	85	0.069732	0.070069	0.000032	8547	0.070069
13	99.5	33.45	291.9	-0.9	843	-33	-0.006912	-0.000809	-0.000012	23684	0.000289
	5	14.761	672.5	3.5	-223	775	-0.001832	-0.001832	25.2	43	0.001287
		0.002371	55.5	4.7	92.59	99				1459	8.64
29	0.25	0.152	0.605	3.8	9679	220	0.079488	0.079867	0.000082	9726	0.079867
14	99.7	33.56	291.6	-1	953	-35	-0.007827	-0.00087	-0.000013	26962	0.00033
	5	14.761	671.8	3.9	-265	883	-0.002178	-0.002178	28.4	49	0.001345
		0.002372	55.3	5.3	92.26	106				1400	8.69

RUN POINT	V/OR VKTS ALFS,U	MTUN QPSF BARO RHO	MTIP RPM OMEG*R TTEMPF	THETA A1 B1 CONING	LIFTH,C DRAGH,C SIDEH,C SKANGLE	PITCHH,S ROLLH,S TORQ,C HFORCE	CLRH/S CXRH/S CYRH/S	CLRHS/S CXRHS/S CYRHS/S	CMYHS/S CMXHS/S FE	THRUST POW HP VD	CTH/S CP/S CPO/S L/DR
29	0.25	0.151	0.607	4.8	11018	238	0.090101	0.090516	0.000088	11069	0.090516
15	99.7	33.53	292.4	-1.1	1063	45	-0.008692	-0.000806	0.000017	37791	0.000459
	5	14.761	673.6	4.5	-299	1234	-0.002444	-0.002444	31.71	69	0.001414
		0.002369	55.9	5.9	91.88	99				1331	8.56
29	0.25	0.152	0.606	5.8	12131	196	0.099437	0.099872	0.000073	12184	0.099872
16	99.7	33.55	292	-1.3	1138	-7	-0.009327	-0.000625	-0.000002	55176	0.000672
	5	14.76	672.7	5.1	-360	1804	-0.002955	-0.002955	33.92	100	0.001526
		0.00237	55.7	6.4	91.57	76				1272	8.28
29	0.25	0.152	0.606	6.9	13481	266	0.110284	0.110759	0.000099	13539	0.110759
17	99.7	33.57	292.3	-1.5	1254	-126	-0.01026	-0.000609	-0.000047	80084	0.000973
	5	14.759	673.4	5.6	-458	2616	-0.003746	-0.003746	37.36	146	0.001717
		0.00237	55.7	7	91.18	74				1232	7.79
29	0.251	0.152	0.604	8.1	14460	206	0.119457	0.119931	0.000077	14517	0.119931
18	99.7	33.57	290.8	-1.8	1290	10	-0.010657	-0.000205	0.000004	121183	0.001494
	5	14.754	670	6.4	-498	3979	-0.004113	-0.004113	38.43	220	0.002046
		0.002371	55.3	7.5	90.91	25				1174	7.19
29	0.251	0.152	0.604	8.1	14472	197	0.119557	0.120031	0.000074	14529	0.120031
19	99.7	33.57	290.8	-1.8	1291	17	-0.010668	-0.000207	0.000006	120893	0.001491
	5	14.754	670	6.4	-501	3970	-0.004136	-0.004136	38.47	220	0.002042
		0.002371	55.3	7.5	90.9	25				1174	7.2
31	0.251	0.152	0.605	2.2	9904	186	0.081659	0.083113	0.00007	10081	0.083113
11	99.9	33.51	291.9	-0.8	1882	-49	-0.015514	-0.001084	-0.000018	-110320	-0.001353
	10.01	14.715	672.5	3.4	-281	-3609	-0.002317	-0.002317	56.14	-201	0.001542
		0.002358	56.6	5.6	97.18	131				2273	8.07



RUN POINT	V/OR VKTS	MTUN QPSF	MTP RPM	THETA		LIFTH,C DRAGH,C	PITCHH,S ROLLH,S	CLRH/S CXRH/S	CLRHS/S CXRHS/S	CMYHS/S CMXHS/S	THRUST		CTH/S CP/S
				A1	B1						POW	HP	
	ALFS,U	BARO	OMEG*R	CONING	SKANGLE		TORQ,C	CYRH/S	CYRHS/S	FE	VD	L/DR	
		RHO	TTEMPF			HFORCE							
31	0.251	0.152	0.605	2.9	10766	234		0.088683	0.090232	0.000088	10954		0.090232
12	99.9	33.56	292	-0.9	2024	-132		-0.016676	-0.001007	-0.000049	-114800		-0.001406
	10.01	14.715	672.7	3.8	-329	-3754		-0.002712	-0.002712	60.33	-209		0.001603
		0.002358	56.5	6	96.93	122					2226		8.01
31	0.25	0.152	0.607	4	11994	298		0.098419	0.10009	0.000111	12198		0.10009
13	100	33.56	292.7	-1	2222	-90		-0.018231	-0.000847	-0.000034	-117886		-0.001434
	10.01	14.715	674.3	4.4	-372	-3846		-0.003051	-0.003051	66.21	-214		0.001681
		0.002356	56.9	6.6	96.58	103					2164		7.87
31	0.251	0.152	0.605	5.1	13149	301		0.108491	0.11028	0.000113	13366		0.11028
14	99.9	33.6	291.6	-1.2	2399	-184		-0.019794	-0.000635	-0.000069	-108389		-0.001331
	10.01	14.715	671.8	5	-436	-3550		-0.003601	-0.003601	71.41	-197		0.001886
		0.002361	55.9	7.2	96.25	77					2110		7.49
31	0.251	0.152	0.606	6.3	14415	275		0.118523	0.120413	0.000103	14645		0.120413
15	100	33.63	292	-1.2	2585	-109		-0.02125	-0.000325	-0.000041	-89348		-0.001092
	10.01	14.716	672.7	5.7	-473	-2922		-0.003887	-0.003887	76.86	-162		0.002142
		0.002363	55.6	7.8	95.88	40					2055		7.01
31	0.252	0.152	0.604	2.2	9848	46		0.081464	0.082877	0.000017	10019		0.082877
16	100.1	33.64	291.5	-0.9	1845	-54		-0.015263	-0.000871	-0.000002	-107625		-0.001326
	10.01	14.716	671.6	3.6	-303	-3526		-0.002508	-0.002508	54.85	-196		0.001528
		0.002357	56.9	5.6	97.2	105					2257		8.15

RUN POINT	V/OR VKTS ALFS,U	MTUN QPSF BARO RHO	MTIP RPM OMEG* R	THETA		LIFTH,C DRAGH,C SIDEH,C SKANGLE	PITCHH,S ROLLH,S TORQ,C HFORCE		CLRHS CXRHS CYRHS	CLRHS/S CXRHS/S CYRHS/S	CMYHS/S CMXHS/S FE	THRUST		CTH/S CP/S CPO/S LDR
				A1	B1							POW	HP	VD
36	0.228	0.138	0.606	7.8	7850	251	0.064532	0.065467	0.000094	7964	0.065467			
6	91.7	27.86	294.3	-0.9	-1341	-185	0.011028	-0.000346	-0.000069	379293	0.004599			
	-10	14.681	678	4.6	-125	12307	-0.001024	-0.001024	-48.14	690	0.001399			
		0.002326	62.7	4	77.4	42				-1182	7.08			
36	0.251	0.152	0.605	8.3	7846	316	0.064967	0.065892	0.000119	7958	0.065892			
7	100.6	33.48	293.4	-0.9	-1330	-119	0.01101	-0.000439	-0.000045	398693	0.004884			
	-10	14.682	675.9	5.1	-118	12976	-0.00098	-0.00098	-39.71	725	0.00149			
		0.002324	62.4	4	77.83	53				-1196	7.7			
36	0.227	0.138	0.606	7.8	7824	232	0.064376	0.065317	0.000087	7939	0.065317			
8	91.3	27.64	294.1	-1.1	-1344	-200	0.011055	-0.000292	-0.000075	378526	0.004596			
	-10	14.683	677.6	4.6	-137	12291	-0.001123	-0.001123	-48.61	688	0.001401			
		0.002328	62.5	4	77.38	35				-1186	7.03			
36	0.201	0.121	0.604	7.3	7767	249	0.064181	0.065121	0.000094	7881	0.065121			
9	80.2	21.39	293.2	-1.1	-1334	-142	0.011025	-0.000288	-0.000053	351720	0.004303			
	-10	14.683	675.5	4	-139	11455	-0.001152	-0.001152	-62.38	639	0.001324			
		0.002332	62.5	4	76.66	35				-1117	6.15			
36	0.178	0.107	0.604	7	7803	206	0.064236	0.065184	0.000077	7918	0.065184			
10	71.1	16.84	293.4	-1.2	-1346	-103	0.01108	-0.000243	-0.000039	337593	0.004112			
	-10	14.686	675.9	3.5	-148	10988	-0.001222	-0.001222	-79.92	614	0.001275			
		0.002337	62.1	4	75.77	29				-1045	5.32			
36	0.151	0.091	0.605	6.7	7787	285	0.063934	0.064857	0.000106	7899	0.064857			
11	60.4	12.15	293.6	-1.4	-1328	-126	0.010908	-0.00036	-0.000047	320570	0.003891			
	-10	14.685	676.4	2.9	-163	10426	-0.001336	-0.001336	-109.34	583	0.001233			
		0.00234	62.1	4	74.23	44				-918	4.28			

RUN POINT	V/OR VKTS ALFS,U	MTUN QPSF BARO RHO	MTP RPM OMEG*R TTEMPF	THETA A1 B1 CONING	LIFTH,C DRAGH,C SIDEH,C SKANGLE	PITCHH,S ROLLH,S TORQ,C HFORCE	CLRH/S CXRH/S CYRH/S	CLRHS/S CXRHS/S CYRHS/S	CMYHS/S CMXHS/S FE	THRUST POW HP VD	CTH/S CP/S CPO/S L/DR
36	0.15	0.091	0.605	6.7	7848	351	0.064233	0.06513	0.000131	7957	0.06513
22	60.3	12.12	293.9	-1.2	-1318	-92	0.010787	-0.000531	-0.000034	321670	0.003888
	-10	14.693	677.1	2.8	-159	10452	-0.0013	-0.0013	-108.75	585	0.001241
		0.002343	61.9	4.1	74.18	65				-902	4.25
36	0.124	0.075	0.606	6.6	7885	304	0.064362	0.065259	0.000113	7995	0.065259
23	50	8.34	294.1	-1.5	-1323	-53	0.010798	-0.000542	-0.00002	315690	0.003803
	-10	14.694	677.6	2.4	-168	10250	-0.001368	-0.001368	-158.56	574	0.001214
		0.002346	61.8	4.1	71.71	66				-775	3.26
36	0.101	0.061	0.605	6.6	7838	238	0.063968	0.064861	0.000088	7947	0.064861
24	40.5	5.49	294	-1.7	-1316	-94	0.01074	-0.000531	-0.000035	312913	0.003771
	-10	14.694	677.3	2	-184	10164	-0.001502	-0.001502	-239.57	569	0.001171
		0.002348	61.8	4	68.01	65				-646	2.41
36	0.091	0.055	0.605	6.7	7897	230	0.064554	0.065454	0.000086	8007	0.065454
25	36.6	4.49	293.7	-1.8	-1325	-167	0.010831	-0.000543	-0.000062	316995	0.00383
	-10	14.694	676.6	1.8	-201	10307	-0.00164	-0.00164	-295.18	576	0.001134
		0.002349	61.7	4.1	65.68	66				-589	2.08
36	0.081	0.049	0.605	6.8	7854	217	0.064161	0.065056	0.00008	7964	0.065056
26	32.6	3.56	293.7	-2	-1318	-204	0.01077	-0.000535	-0.000076	318349	0.003843
	-10	14.694	676.6	1.6	-208	10351	-0.001701	-0.001701	-370.65	579	0.001074
		0.002351	61.5	4	62.8	66				-529	1.76
36	0.071	0.043	0.604	6.9	7814	267	0.063874	0.064757	0.000099	7922	0.064757
27	28.6	2.74	293.5	-2	-1305	-202	0.010669	-0.000584	-0.000075	321091	0.003882
	-10	14.695	676.2	1.4	-210	10447	-0.001714	-0.001714	-476.7	584	0.000982
		0.002352	61.3	4	59.15	72				-465	1.46

RUN POINT	V/OR VKTS ALFS,U	MTUN QPSF BARO RHO	MTIP RPM OMEG*R TTEMPF	THETA A1 B1 CONING	LIFTH,C DRAGH,C SIDEH,C SKANGLE	PITCHH,S ROLLH,S TORQ,C HFORCE	CLRH/S CXRH/S CYRH/S	CLRHS/S CXRHS/S CYRHS/S	CMYHS/S CMXHS/S FE	THRUST POW HP VD	CTH/S CP/S CPO/S LDR
36	0.061	0.037	0.604	7.1	7804	297	0.06391	0.064791	0.000111	7912	0.064791
28	24.3	1.98	293.2	-2	-1303	-209	0.010666	-0.000594	-0.000078	326461	0.003958
	-10	14.696	675.5	1.2	-208	10633	-0.001706	-0.001706	-657.57	594	0.000795
		0.002353	61.3	4	54.07	72				-398	1.17
36	0.051	0.031	0.605	7.4	7902	253	0.064472	0.065376	0.000094	8012	0.065376
29	20.5	1.41	293.7	-1.9	-1329	-224	0.010847	-0.000513	-0.000083	340049	0.0041
	-10	14.697	676.6	1	-201	11056	-0.001643	-0.001643	-944.15	618	0.000505
		0.002354	61.3	4.1	48.17	63				-340	0.93
36	0.042	0.025	0.604	7.5	7832	230	0.063953	0.064864	0.000085	7944	0.064864
30	16.7	0.94	293.6	-1.7	-1327	-202	0.010838	-0.000432	-0.000075	343014	0.004141
	-10	14.697	676.4	0.9	-184	11156	-0.001505	-0.001505	-1412.12	624	0.000946
		0.002353	61.4	4	41.58	53				-281	0.72
36	0.031	0.019	0.605	7.8	7883	280	0.064273	0.065191	0.000104	7995	0.065191
31	12.3	0.51	293.8	-1.2	-1338	-173	0.010907	-0.00042	-0.000064	358658	0.00432
	-10	14.698	676.9	0.6	-150	11657	-0.001227	-0.001227	-2622.88	652	0.001101
		0.002354	61.5	4	32.15	51				-208	0.5
36	0.021	0.013	0.605	8	7848	244	0.063848	0.064771	0.00009	7961	0.064771
32	8.5	0.24	294.1	-0.7	-1340	-28	0.010902	-0.000351	-0.00001	382700	0.004595
	-10	14.699	677.6	0.4	-101	12426	-0.000822	-0.000822	-5583.6	696	0.001407
		0.002354	61.5	4	22.91	43				-144	0.31
36	0.006	0.004	0.605	8.3	7818	273	0.063597	0.064534	0.000101	7933	0.064534
33	2.4	0.02	294	0.4	-1347	246	0.01096	-0.00025	0.000091	405537	0.004871
	-10	14.702	677.3	0.2	28	13172	0.000232	0.000232	0	737	0.0017
		0.002356	61.3	4	6.9	31				-42	0.08

RUN POINT	V/OR VKTS ALFS,U	MTUN QPSF BARO RHO	MTIP RPM OMEG* R	THETA A1 B1 CONING	LIFTH,C DRAGH,C SIDEH,C SKANGLE	PITCHH,S ROLLH,S TORQ,C HFORCE	CLRHS/S CXRHS/S CYRH/S	CLRHS/S CXRHS/S CYRH/S	CMYHS/S CMXHS/S FE	THRUST POW HP VD	CTH/S CP/S CPO/S L/D
51	0.25	0.152	0.606	6.3	7805	14	0.063896	0.064099	0.000005	7830	0.064099
5	100	33.62	292.8	-1	-626	-120	0.005121	-0.000456	-0.000044	271750	0.003298
	-4.99	14.766	674.6	4.7	-144	8863	-0.001179	-0.001179	-18.61	494	0.001406
		0.00236	57.9	4	82.84	56				-288	7.93
51	0.2	0.121	0.605	5.9	7934	-38	0.064927	0.065135	-0.000014	7960	0.065135
6	79.8	21.51	292.3	-1.2	-638	-162	0.005222	-0.000445	-0.000006	257897	0.003134
	-4.99	14.766	673.4	3.8	-156	8425	-0.001274	-0.001274	-29.67	469	0.001301
		0.002369	57.7	4.1	81.58	54				-387	6.22
51	0.15	0.091	0.605	5.6	7968	31	0.064838	0.065034	0.000011	7992	0.065034
7	60.1	12.21	292.7	-1.5	-623	-65	0.005069	-0.00059	-0.000024	252524	0.003047
	-4.99	14.765	674.3	2.9	-159	8239	-0.00129	-0.00129	-51.02	459	0.001239
		0.002376	57.5	4.1	79.03	72				-363	4.27
51	0.125	0.075	0.605	5.6	7934	-10	0.064601	0.064797	-0.000004	7958	0.064797
8	49.8	8.39	292.5	-1.8	-623	-97	0.005069	-0.000569	-0.000036	256426	0.003098
	-4.99	14.766	673.9	2.5	-177	8372	-0.00144	-0.00144	-74.16	466	0.001215
		0.002378	57.7	4.1	76.5	70				-331	3.27
51	0.101	0.061	0.605	5.9	7961	39	0.064561	0.064748	0.000015	7984	0.064748
9	40.2	5.49	292.9	-2	-612	-95	0.004966	-0.000669	-0.000035	269748	0.003242
	-4.99	14.766	674.8	2	-190	8794	-0.001541	-0.001541	-111.47	490	0.001194
		0.002381	57.5	4.1	72.42	82				-279	2.37
51	0.091	0.055	0.605	6	7946	25	0.064434	0.06462	0.000009	7969	0.06462
10	36.4	4.49	292.9	-2.2	-611	-214	0.004952	-0.000671	-0.000079	276708	0.003325
	-4.99	14.766	674.8	1.8	-211	9021	-0.001709	-0.001709	-136.04	503	0.001168
		0.002381	57.6	4	70.01	83				-258	2.04

RUN POINT	V/OR VKTS ALFS,U	MTUN QPSF BARO RHO	MTIP RPM OMEG*R TTEMPF	THETA		LIFTH,C DRAGH,C SIDEH,C SKANGLE	PITCHH,S ROLLH,S TORQ,C HFORCE		CLRH/S CXRH/S CYRH/S	CLRHS/S CXRHS/S CYRHS/S	CMYHS/S CMXHS/S FE	THRUST		CTH/S CP/S CPO/S LDR
				A1	B1							POW	HP	
51	0.081	0.049	0.606	6.3	8010	29	0.064787	0.064971	0.00001	8033	0.064971			
11	32.3	3.55	293.2	-2.3	-610	-219	0.004934	-0.00072	-0.00008	288531	0.003455			
	-4.99	14.767	675.5	1.6	-219	9397	-0.001775	-0.001775	-171.99	525	0.001113			
		0.002382	57.5	4	66.65	89				-231	1.71			
51	0.071	0.043	0.605	6.5	8017	60	0.064963	0.065143	0.000022	8039	0.065143			
12	28.3	2.73	292.9	-2.3	-604	-149	0.004895	-0.000774	-0.000055	300015	0.003603			
	-4.99	14.767	674.8	1.4	-215	9781	-0.001743	-0.001743	-221.45	545	0.00103			
		0.002383	57.5	4	62.51	96				-204	1.41			
51	0.06	0.036	0.605	6.8	7990	78	0.064868	0.065047	0.000029	8012	0.065047			
13	24	1.95	292.6	-2.3	-600	-217	0.004874	-0.000787	-0.00008	310888	0.003744			
	-4.99	14.766	674.1	1.2	-222	10146	-0.001802	-0.001802	-307.86	565	0.000829			
		0.002383	57.5	4	56.72	97				-175	1.13			
51	0.05	0.03	0.605	7.1	7956	47	0.064522	0.064704	0.000018	7978	0.064704			
14	20.1	1.37	292.7	-2.3	-605	-274	0.00491	-0.000721	-0.000101	321256	0.003864			
	-4.99	14.766	674.3	1	-224	10481	-0.001821	-0.001821	-442.88	584	0.000517			
		0.002384	57.4	4	50.28	89				-150	0.9			
51	0.041	0.025	0.606	7.5	8007	82	0.064778	0.064964	0.00003	8030	0.064964			
15	16.3	0.9	293	-2	-613	-256	0.00496	-0.000693	-0.000094	334301	0.004007			
	-4.99	14.766	675	0.8	-204	10895	-0.001648	-0.001648	-681.22	608	0.000804			
		0.002385	57.3	4	42.6	86				-124	0.69			
51	0.029	0.018	0.604	7.7	7915	143	0.064418	0.064603	0.000053	7938	0.064603			
16	11.8	0.47	292.1	-1.5	-607	-263	0.00494	-0.000682	-0.000097	345439	0.004178			
	-4.99	14.766	673	0.5	-167	11293	-0.001361	-0.001361	-1291.45	628	0.001002			
		0.002385	57.3	4	32.3	84				-90	0.47			

RUN POINT	V/OR VKTS ALFS,U	MTUN QPSF BARO RHO	MTIP RPM OMEG*R TTEMPF	THETA		LIFTH,C A1 DRAGH,C B1 SIDEH,C CONING SKANGLE	PITCHH,S		CLRHS CXRH/S CYRH/S	CLRHS/S CXRH/S CYRH/S	CMYHS/S CMXHS/S FE	THRUST		CTHS CPS CPO/S L/DR
							ROLLH,S TORQ,C HFORCE	POW HP VD						
51	0.02	0.012	0.606	8	8010	-35			0.064806	0.065017	-0.000013	8036		0.065017
17	7.9	0.21	292.9	-0.9	-649	-211			0.005253	-0.000404	-0.000078	383837		0.004602
	-4.99	14.766	674.8	0.5	-121	12514			-0.000982	-0.000982	-3091.68	698		0.001396
		0.002387	57.1	4	22.06	50						-64		0.28
51	0.011	0.007	0.604	8.3	7906	99			0.064326	0.064533	0.000037	7932		0.064533
18	4.5	0.07	292.1	-0.4	-637	-130			0.00518	-0.000435	-0.000048	399495		0.00483
	-4.99	14.766	673	0.3	-57	13060			-0.000461	-0.000461	-9095.8	726		0.00166
		0.002386	57.2	3.9	13.03	53						-37		0.15
32	0.252	0.152	0.605	5.1	7882	166			0.065259	0.065272	0.000062	7884		0.065272
7	100.5	33.59	292.7	-1	-183	-192			0.001518	-0.00076	-0.000072	191990		0.002357
	-2	14.651	674.3	4.2	-172	6264			-0.001423	-0.001423	-5.46	349		0.001342
		0.002335	59	4.2	85.8	92						283		8.31
32	0.201	0.122	0.606	4.9	8013	110			0.065914	0.065939	0.000041	8016		0.065939
8	80.3	21.53	293.1	-1.2	-227	-133			0.001866	-0.000435	-0.00005	196603		0.002395
	-2	14.653	675.3	3.6	-167	6405			-0.001377	-0.001377	-10.54	357		0.001211
		0.002344	58.9	4.2	84.52	53						32		6.55
32	0.15	0.091	0.606	4.9	8041	167			0.065772	0.065799	0.000062	8044		0.065799
9	60.1	12.09	293.5	-1.7	-235	-98			0.001924	-0.000372	-0.000037	208156		0.002518
	-2	14.656	676.2	2.7	-178	6773			-0.00146	-0.00146	-19.46	378		0.001151
		0.002351	58.9	4.2	81.84	46						-68		4.42
32	0.125	0.076	0.606	5	7957	144			0.065103	0.065132	0.000054	7960		0.065132
10	50.1	8.41	293.2	-1.8	-241	-23			0.001975	-0.000299	-0.000008	218450		0.002646
	-2	14.657	675.5	2.4	-183	7115			-0.001498	-0.001498	-28.68	397		0.001132
		0.002355	58.6	4.1	79.35	36						-89		3.4

RUN POINT	V/OR VKTS ALFS,U	MTUN QPSF BARO RHO	MTP RPM OMEG*R TTEMPF	THETA A1 B1 CONING	LIFTH,C DRAGH,C SIDEH,C SKANGLE	PITCHH,S ROLLH,S TORQ,C HFORCE	CLRH/S CXRH/S CYRH/S	CLRHS/S CXRHS/S CYRHS/S	CMYHS/S CMXHS/S FE	THRUST POW HP VD	CTHS/ CPS/ CPO/S L/DR
32	0.1	0.061	0.604	5.3	7927	250	0.065047	0.065072	0.000093	7930	0.065072
11	40.2	5.41	292.7	-2.1	-227	2	0.001862	-0.000409	0.000001	235550	0.002866
	-2	14.656	674.3	2	-201	7685	-0.001651	-0.001651	-41.93	428	0.001105
		0.002356	58.7	4.1	75	50				-83	2.44
32	0.08	0.048	0.604	5.9	7965	218	0.06535	0.065374	0.000081	7968	0.065374
12	32	3.44	292.5	-2.5	-225	-83	0.001844	-0.000438	-0.000031	263233	0.003205
	-2	14.657	673.9	1.7	-232	8594	-0.001903	-0.001903	-65.26	479	0.001065
		0.00236	58.3	4.1	68.71	53				-75	1.71
32	0.061	0.037	0.605	6.6	7997	193	0.065403	0.065427	0.000072	8000	0.065427
13	24.3	1.98	292.9	-2.6	-226	-155	0.001847	-0.000437	-0.000058	296857	0.003598
	-2	14.657	674.8	1.3	-260	9678	-0.002126	-0.002126	-114	540	0.000851
		0.002361	58.3	4.1	58.87	53				-62	1.14
32	0.05	0.03	0.604	7	7944	229	0.065179	0.065203	0.000085	7946	0.065203
14	20.1	1.36	292.4	-2.5	-224	-105	0.001834	-0.000442	-0.000039	307914	0.003751
	-2	14.657	673.6	1.2	-247	10056	-0.002029	-0.002029	-164.75	560	0.000501
		0.002361	58.3	4.1	51.66	54				-53	0.9
32	0.04	0.024	0.606	7.4	8072	290	0.065697	0.06572	0.000107	8075	0.06572
15	16	0.86	293.5	-2	-222	-2	0.001807	-0.000487	-0.000001	329057	0.00396
	-2	14.658	676.2	0.9	-214	10706	-0.00174	-0.00174	-258.21	598	0.000702
		0.002363	58.1	4.1	42.71	60				-42	0.67
32	0.03	0.018	0.606	7.7	8033	296	0.065497	0.065522	0.00011	8037	0.065522
16	12.1	0.49	293.2	-1.7	-228	-169	0.001862	-0.000425	-0.000063	342643	0.004136
	-2	14.659	675.5	0.6	-204	11160	-0.001661	-0.001661	-466.11	623	0.000892
		0.002363	58.1	4.1	33.35	52				-34	0.48



RUN POINT	V/OR VKTS ALFS,U	MTUN QPSF BARO RHO	MTIP RPM OMEG*R TTEMPF	THETA		LIFTH,C A1 DRAGH,C B1 SIDEH,C CONING SKANGLE	PITCHH,S ROLLH,S TORQ,C HFORCE		CLRHS CXRHS CYRHS	CLRHS/S CXRHS/S CYRHS/S	CMYHS/S CMXHS/S FE	THRUST POW HP VD	CTH/S CP/S CPO/S L/DR
32	0.02	0.012	0.605	8	8000		248		0.065304	0.065334	0.000092	8004	0.065334
17	8.1	0.22	293	-1	-247		-126		0.002019	-0.000261	-0.000047	378504	0.004577
	-2	14.66	675	0.5	-151		12336		-0.001234	-0.001234	-1124.56	688	0.001347
		0.002364	58.1	4	22.91		32					-25	0.29
32	0.011	0.006	0.604	8.6	8388		143		0.068647	0.068691	0.000053	8393	0.068691
18	4.2	0.06	292.6	-0.4	-300		66		0.002458	0.000061	0.000025	427167	0.005186
	-2	14.661	674.1	0.5	-72		13941		-0.000593	-0.000593	-5006.05	777	0.001704
		0.002364	58.1	4	11.85		-7					-15	0.14
32	0	0	0.605	8.3	8025		61		0.065517	0.065556	0.000023	8030	0.065556
19	0	0	292.9	-0.2	-276		375		0.00225	-0.000038	0.000139	395314	0.004783
	-2	14.661	674.8	0	1		12888		0.00001	0.00001	0	719	0.001537
		0.002365	58	4.1	0.05		5					0	0
34	0.251	0.152	0.605	5.1	7991		227		0.06557	0.065585	0.000085	7993	0.065585
5	99.7	33.8	290.8	-0.9	-193		-175		0.00158	-0.000709	-0.000065	195370	0.002393
	-2	14.757	670	4.2	-164		6416		-0.001346	-0.001346	-5.7	355	0.001356
		0.002387	52.3	4.2	85.78		86					269	8.25
34	0.22	0.133	0.605	5	8023		84		0.065592	0.065619	0.000031	8027	0.065619
6	87.3	25.95	291	-1.2	-234		-114		0.001912	-0.000379	-0.000042	197650	0.00241
	-2	14.758	670.4	3.9	-160		6486		-0.001305	-0.001305	-9.01	359	0.001258
		0.002393	52.3	4.2	85.1		46					85	7.24
34	0.198	0.12	0.606	4.8	7980		128		0.065041	0.065069	0.000047	7984	0.065069
7	78.5	21.05	291.2	-1.2	-238		-17		0.001937	-0.000334	-0.000006	197446	0.002399
	-2	14.757	670.9	3.4	-153		6475		-0.001249	-0.001249	-11.29	359	0.001215
		0.002397	52.1	4.2	84.46		41					15	6.37

RUN POINT	V/OR VKTS ALFS,U	MTUN QPSF BARO RHO	MTIP RPM OMEG*R TTEMPF	THETA		LIFTH,C		PITCHH,S		CLRH/S CXRH/S CYRH/S	CLRH/S CXRH/S CYRH/S	CMYHS/S CMXHS/S FE	THRUST		CTH/S CP/S CPO/S L/DR		
				A1	B1	DRAGH,C	SIDEH,C	TORQ,C	HFORCE				POW	HP			
																CONING	SKANGLE
34	0.174	0.105	0.605	4.8	8028			131		0.065405	0.065435	0.000049	8031		0.065435		
8	69	16.27	291.1	-1.5	-246			-111		0.002006	-0.000278	-0.000041	201520		0.002448		
	-2	14.758	670.6	3.1	-176			6611		-0.001438	-0.001438	-15.13	366		0.001179		
		0.002399	52.3	4.2	83.4			34					-44		5.41		
34	0.152	0.092	0.606	4.8	8037			226		0.065152	0.06518	0.000083	8041		0.06518		
9	60.5	12.52	291.7	-1.6	-239			-5		0.001939	-0.000336	-0.000002	207360		0.002501		
	-2	14.757	672	2.7	-173			6788		-0.001403	-0.001403	-19.11	377		0.001162		
		0.002402	52.3	4.2	82.05			41					-68		4.49		
34	0.124	0.075	0.606	5.1	8093			203		0.065658	0.065688	0.000075	8097		0.065688		
10	49.2	8.29	291.4	-1.9	-246			-21		0.001996	-0.000296	-0.000008	223148		0.002697		
	-2	14.758	671.3	2.3	-195			7313		-0.001579	-0.001579	-29.68	406		0.001146		
		0.002405	52.3	4.3	79.09			37					-90		3.32		
34	0.102	0.062	0.606	5.4	8103			309		0.065462	0.065487	0.000113	8106		0.065487		
11	40.7	5.68	291.9	-2.2	-230			-69		0.001859	-0.000426	-0.000025	239737		0.00288		
	-2	14.758	672.5	2	-220			7843		-0.001776	-0.001776	-40.54	436		0.001121		
		0.002406	52.3	4.2	75.3			53					-82		2.49		
34	0.092	0.056	0.606	5.5	8004			264		0.064824	0.064849	0.000097	8007		0.064849		
12	36.8	4.64	291.5	-2.2	-229			12		0.001856	-0.000407	0.000004	247796		0.002988		
	-2	14.758	671.6	1.9	-211			8118		-0.001708	-0.001708	-49.37	451		0.001117		
		0.002407	52.3	4.2	72.97			50					-81		2.13		
34	0.082	0.05	0.605	5.9	8056			232		0.065406	0.065432	0.000086	8059		0.065432		
13	32.8	3.68	291.1	-2.4	-233			-40		0.001888	-0.000396	-0.000015	263822		0.003194		
	-2	14.758	670.6	1.8	-228			8654		-0.001852	-0.001852	-63.19	480		0.001098		
		0.002408	52.3	4.2	69.56			49					-78		1.77		

RUN POINT	V/OR VKTS ALFS,U	MTUN QPSF BARO RHO	MTP RPM OMEG*R TTEMPF	THETA A1 B1 CONING	LIFTH,C DRAGH,C SIDEH,C SKANGLE	PITCHH,S ROLLH,S TORQ,C HFORCE	CLRH/S CXRH/S CYRH/S	CLRH/S CXRH/S CYRH/S	CMYHS/S CMXHS/S FE	THRUST POW HP VD	CTH/S CP/S CPO/S LDR
34	0.072	0.044	0.607	6.2	8060	175	0.064935	0.06496	0.000064	8063	0.06496
14	28.8	2.85	292.2	-2.6	-231	-148	0.00186	-0.000407	-0.000054	282515	0.003381
	-2	14.758	673.2	1.5	-252	9233	-0.002031	-0.002031	-81.01	514	0.001065
		0.002408	52.3	4.2	65.38	51				-71	1.45
34	0.061	0.037	0.605	6.6	8027	245	0.065001	0.065022	0.00009	8029	0.065022
15	24.5	2.05	291.4	-2.6	-214	-126	0.001731	-0.000538	-0.000047	297425	0.003588
	-2	14.759	671.3	1.3	-253	9747	-0.002048	-0.002048	-104.17	541	0.000911
		0.002409	52.3	4.1	59.48	66				-58	1.15
34	0.053	0.032	0.604	6.9	8001	286	0.065006	0.065025	0.000106	8003	0.065025
16	20.9	1.5	290.9	-2.5	-207	-133	0.001678	-0.000592	-0.000049	307946	0.003733
	-2	14.759	670.2	1.1	-248	10109	-0.002014	-0.002014	-137.66	560	0.000643
		0.002409	52.3	4.1	53.47	73				-50	0.94
34	0.042	0.026	0.606	7.3	8032	259	0.064796	0.064817	0.000095	8034	0.064817
17	16.8	0.97	291.9	-2.2	-215	-103	0.001732	-0.00053	-0.000038	323498	0.003881
	-2	14.76	672.5	0.9	-231	10583	-0.001861	-0.001861	-221.77	588	0.000689
		0.00241	52.3	4.1	44.99	66				-43	0.72
34	0.032	0.02	0.606	7.7	8044	314	0.065049	0.06507	0.000115	8047	0.06507
18	12.9	0.57	291.5	-1.6	-214	-108	0.001731	-0.000541	-0.00004	341376	0.004111
	-2	14.76	671.6	0.6	-191	11183	-0.001548	-0.001548	-375.47	621	0.000901
		0.002411	52.2	4.1	35.71	67				-34	0.52
38	0.25	0.151	0.605	2.2	7832	82	0.064408	0.064728	0.000031	7870	0.064728
5	99.7	33.39	292.2	-0.7	788	-8	-0.006481	-0.000843	-0.000003	21295	0.00026
	5	14.745	673.2	3.1	-194	696	-0.001596	-0.001596	23.6	39	0.001259
		0.002359	57.3	4.3	92.78	103				1515	8.56

RUN POINT	V/OR VKTS ALFS,U	MTUN QPSF BARO RHO	MTTP RPM OMEG*R TTEMPF	THETA		LIFTH,C DRAGH,C SIDEH,C SKANGLE	PITCHH,S		CLRHS CXRHS CYRHS	CLRHS/S CXRHS/S CYRHS/S	CMYHS/S		THRUST		CTH/S CP/S CPO/S L/DR
				A1	B1		ROLLH,S	TORQ,C			FE	POW	HP	VD	
38	0.224	0.136	0.606	2.3	7885	101	0.064566	0.06487	0.000038	7922	0.06487				
6	89.3	26.86	292.5	-0.8	770	104	-0.006309	-0.000658	0.000039	37875	0.00046				
	5	14.745	673.9	3	-175	1237	-0.001433	-0.001433	28.68	69	0.001174				
		0.002364	57.1	4.3	92.21	80				1242	7.72				
38	0.198	0.12	0.606	2.5	7908	105	0.064571	0.06486	0.000039	7943	0.06486				
7	79	21.08	292.6	-1.1	751	12	-0.006134	-0.000483	0.000005	55654	0.000674				
	5	14.746	674.1	2.6	-179	1816	-0.001462	-0.001462	35.64	101	0.0011				
		0.002369	56.9	4.3	91.44	59				1008	6.77				
38	0.174	0.105	0.605	2.7	7877	171	0.064473	0.064755	0.000064	7912	0.064755				
8	69.2	16.19	292	-1.4	739	25	-0.006046	-0.000404	0.000009	73989	0.0009				
	5	14.746	672.7	2.3	-172	2420	-0.001406	-0.001406	45.61	135	0.001055				
		0.002374	56.7	4.3	90.38	49				824	5.74				
38	0.151	0.091	0.606	2.9	7959	98	0.064804	0.065069	0.000036	7991	0.065069				
9	60.3	12.3	292.6	-1.6	722	83	-0.005881	-0.000211	0.000031	96002	0.00116				
	5	14.746	674.1	2.2	-166	3133	-0.001349	-0.001349	58.7	175	0.001007				
		0.002376	56.7	4.3	88.85	26				663	4.78				
38	0.151	0.091	0.606	2.9	7967	107	0.064823	0.06509	0.00004	8000	0.06509				
10	60.3	12.3	292.7	-1.6	724	70	-0.005887	-0.000215	0.000026	96217	0.001161				
	5	14.747	674.3	2.2	-166	3139	-0.001347	-0.001347	58.81	175	0.001008				
		0.002376	56.7	4.3	88.84	26				664	4.77				
38	0.125	0.076	0.605	3.3	7938	195	0.064755	0.06502	0.000072	7971	0.06502				
11	49.9	8.42	292.1	-2	720	48	-0.005872	-0.000206	0.000018	123985	0.001503				
	5	14.748	673	1.9	-177	4053	-0.001442	-0.001442	85.44	225	0.000983				
		0.00238	56.5	4.3	86.06	25				519	3.62				

RUN POINT	V/OR VKTS ALFS,U	MTUN QPSF BARO RHO	MTP RPM OMEG*R TTEMPF	THETA A1 B1 CONING	LIFTH,C DRAGH,C SIDEH,C SKANGLE	PITCHH,S ROLLH,S TORQ,C HFORCE	CLRH/S CXRH/S CYRH/S	CLRHS/S CXRHS/S CYRHS/S	CMYHS/S CMXHS/S FE	THRUST POW HP VD	CTH/S CPS CPO/S L/DR
38	0.101	0.061	0.606	4	8025	187	0.065096	0.065354	0.000069	8057	0.065354
12	40.5	5.56	292.8	-2.4	715	75	-0.005798	-0.000103	0.000027	159441	0.001917
	5	14.748	674.6	1.8	-191	5200	-0.001546	-0.001546	128.46	290	0.000941
		0.002382	56.5	4.2	81.48	13				398	2.63
38	0.09	0.054	0.605	4.4	8045	205	0.065483	0.065745	0.000076	8077	0.065745
13	35.9	4.39	292.2	-2.7	720	-41	-0.005857	-0.000127	-0.000015	181827	0.002199
	5	14.749	673.2	1.7	-218	5942	-0.001772	-0.001772	164.03	331	0.000947
		0.002383	56.4	4.2	78.09	16				348	2.16
38	0.081	0.049	0.604	4.8	7945	282	0.064736	0.065004	0.000104	7978	0.065004
14	32.5	3.58	292	-2.8	724	-24	-0.005902	-0.000238	-0.000009	197986	0.002398
	5	14.749	672.7	1.6	-222	6475	-0.00181	-0.00181	202.5	360	0.000954
		0.002384	56.3	4.2	74.93	29				316	1.83
38	0.071	0.043	0.609	5.2	8017	331	0.064338	0.064612	0.000121	8051	0.064612
15	28.4	2.75	294.2	-3	742	-92	-0.005952	-0.000322	-0.000033	227123	0.002689
	5	14.749	677.8	1.4	-247	7372	-0.001979	-0.001979	269.87	413	0.000925
		0.002385	56.4	4.2	69.8	40				277	1.46
38	0.06	0.037	0.606	5.9	8005	137	0.064876	0.065144	0.000051	8038	0.065144
16	24.1	1.97	292.7	-3.1	729	23	-0.005904	-0.000227	0.000009	258166	0.003103
	5	14.749	674.3	1.4	-257	8423	-0.002086	-0.002086	369.7	469	0.000847
		0.002386	56.3	4.2	62.81	28				228	1.13
38	0.052	0.031	0.604	6.4	7982	299	0.065001	0.065297	0.000111	8018	0.065297
17	20.6	1.44	291.9	-3.1	766	-24	-0.00624	-0.000551	-0.000009	280734	0.0034
	5	14.75	672.5	1	-272	9184	-0.002215	-0.002215	532.62	510	0.000661
		0.002387	56.1	4.2	55.9	68				204	0.9

RUN POINT	V/OR VKTS ALFS,U	MTUN QPSF BARO RHO	MTIP RPM OMEG*R TTEMPF	THETA		LIFTH,C		PITCHH,S		CLRHS CXRHS CYRHS	CLRH/S CXRH/S CYRH/S	CMYHS/S CMXHS/S FE	THRUST POW HP VD	CTHS/ CPS CPO/S L/DR
				A1	B1	DRAGH,C	SIDEH,C	TORQ,C	HFORCE					
38	0.042	0.025	0.606	7	8001			331		0.064652	0.064951	0.000122	8038	0.064951
18	16.8	0.96	293	-2.8	773			-175		-0.006248	-0.00059	-0.000064	305260	0.003654
	5	14.751	675	0.8	-282			9949		-0.002278	-0.002278	805.45	555	0.000453
		0.002388	56.1	4.1	47.11			73					166	0.69
38	0.031	0.019	0.605	7.5	7980			201		0.064782	0.065062	0.000074	8014	0.065062
19	12.4	0.52	292.3	-1.9	745			-66		-0.006047	-0.000378	-0.000024	322922	0.003893
	5	14.751	673.4	0.8	-216			10550		-0.001751	-0.001751	1432.42	587	0.000683
		0.002388	56.1	4.1	35.58			47					117	0.49
38	0.021	0.013	0.604	7.8	7992			158		0.065128	0.065404	0.000058	8026	0.065404
20	8.4	0.24	291.7	-1.4	738			-113		-0.006012	-0.000313	-0.000042	356430	0.004322
	5	14.752	672	0.5	-173			11668		-0.00141	-0.00141	3073.77	648	0.001087
		0.002389	56	4.1	24.42			38					78	0.31
38	0.01	0.006	0.605	8.5	8006			36		0.064959	0.065216	0.000013	8038	0.065216
21	3.8	0.05	292.3	-0.3	713			15		-0.005783	-0.0001	0.000006	408531	0.004922
	5	14.753	673.4	0.3	-54			13347		-0.000434	-0.000434	14255.88	743	0.001701
		0.00239	55.9	4.2	11.16			12					34	0.13
37	0.251	0.152	0.606	9.8	9581			150		0.078956	0.08011	0.000056	9721	0.08011
5	100.3	33.5	293.2	-1.5	-1645			-297		0.013553	-0.000364	-0.000111	493134	0.006016
	-10	14.706	675.5	5.9	-182			16061		-0.001499	-0.001499	-49.09	897	0.001689
		0.002338	60.3	4.7	77.36			44					-1306	7.55
37	0.2	0.121	0.604	8.9	9645			194		0.079486	0.080654	0.000073	9787	0.080654
6	80	21.38	292.6	-1.7	-1660			-343		0.013683	-0.000327	-0.000129	441860	0.005402
	-10	14.707	674.1	4.6	-211			14421		-0.00174	-0.00174	-77.67	803	0.001482
		0.002348	60	4.8	75.88			40					-1166	5.98

RUN POINT	V/OR VKTS ALFS,U	MTUN QPSF BARO RHO	MTIP RPM OMEG*R TTEMPF	THETA A1 B1 CONING	LIFTH,C DRAGH,C SIDEH,C SKANGLE	PITCHH,S ROLLH,S TORQ,C HFORCE	CLRH/S CXRH/S CYRH/S	CLRHS/S CXRHS/S CYRHS/S	CMYHS/S CMXHS/S FE	THRUST POW HP VD	CTH/S CP/S CPO/S L/DR
37	0.15	0.091	0.605	8.4	9802	109	0.080108	0.081279	0.000041	9946	0.081279
7	60.1	12.12	293.4	-1.8	-1683	-301	0.013757	-0.000363	-0.000112	416204	0.005032
	-10	14.708	675.9	3.6	-234	13546	-0.001911	-0.001911	-138.9	757	0.001368
		0.002355	59.9	4.9	72.82	44				-944	4.05
37	0.1	0.061	0.606	8.3	9729	114	0.079104	0.080223	0.000042	9866	0.080223
8	40.3	5.45	293.8	-2.1	-1644	-196	0.013367	-0.000572	-0.000072	408140	0.004903
	-10	14.708	676.9	2.4	-247	13266	-0.00201	-0.00201	-301.53	742	0.00123
		0.00236	59.7	4.8	65.51	70				-653	2.23
37	0.091	0.055	0.607	8.4	9707	175	0.078666	0.079761	0.000065	9842	0.079761
9	36.4	4.47	294.2	-2.1	-1628	-178	0.013189	-0.000671	-0.000065	410714	0.004911
	-10	14.707	677.8	2.2	-250	13331	-0.002029	-0.002029	-364.23	747	0.001164
		0.002362	59.5	4.8	63.02	83				-591	1.92
37	0.081	0.049	0.606	8.5	9721	127	0.078966	0.08008	0.000047	9858	0.08008
10	32.3	3.52	293.8	-2.2	-1640	-259	0.013323	-0.000591	-0.000096	417157	0.005006
	-10	14.708	676.9	2.1	-269	13559	-0.002182	-0.002182	-466.48	758	0.001039
		0.002362	59.5	4.8	59.62	73				-531	1.62
37	0.071	0.043	0.606	8.7	9699	145	0.07872	0.079829	0.000053	9836	0.079829
11	28.4	2.71	293.9	-2.2	-1636	-288	0.013276	-0.000596	-0.000106	422424	0.005063
	-10	14.708	677.1	1.8	-276	13725	-0.002236	-0.002236	-604.17	768	0.000847
		0.002363	59.5	4.8	55.61	73				-468	1.35
37	0.06	0.036	0.606	8.9	9715	176	0.079013	0.080131	0.000065	9853	0.080131
12	23.9	1.93	293.5	-2.2	-1642	-354	0.013352	-0.000572	-0.000131	431984	0.005196
	-10	14.708	676.2	1.5	-282	14055	-0.002295	-0.002295	-850.74	785	0.00049
		0.002364	59.3	4.8	49.99	70				-398	1.07

RUN POINT	V/OR VKTS ALFS,U	MTUN QPSF BARO RHO	MTIP RPM OMEG*R TTEMPF	THETA A1 B1 CONING	LIFTH,C DRAGH,C SIDEH,C SKANGLE	PITCHH,S ROLLH,S TORQ,C HFORCE	CLRH/S CXRH/S CYRH/S	CLRHS/S CXRHS/S CYRHS/S	CMYHS/S CMXHS/S FE	THRUST POW HP VD	CTH/S CP/S CPO/S LDR
37	0.05	0.03	0.604	9.1	9732	185	0.07946	0.080587	0.000069	9870	0.080587
13	20.1	1.36	292.9	-2.1	-1646	-270	0.013443	-0.000559	-0.0001	441017	0.005336
	-10	14.708	674.8	1.3	-260	14378	-0.002119	-0.002119	-1213.4	802	0.000912
		0.002365	59.3	4.8	44.05	68				-336	0.86
37	0.041	0.025	0.605	9.3	9658	370	0.07872	0.079803	0.000137	9791	0.079803
14	16.3	0.89	293.1	-1.8	-1610	-271	0.013123	-0.000746	-0.0001	446368	0.005388
	-10	14.708	675.3	0.9	-232	14543	-0.001894	-0.001894	-1809.06	812	0.001028
		0.002366	59.2	4.8	37.39	91				-269	0.66
37	0.029	0.018	0.603	9.5	9565	358	0.078314	0.079412	0.000133	9699	0.079412
15	11.7	0.46	292.4	-1.3	-1609	-193	0.013176	-0.000623	-0.000072	463439	0.005633
	-10	14.707	673.6	0.7	-173	15135	-0.001413	-0.001413	-3498.47	843	0.001305
		0.002366	59.1	4.7	28.2	76				-196	0.44
37	0.019	0.012	0.605	9.8	9732	258	0.079134	0.080282	0.000096	9873	0.080282
16	7.7	0.2	293.4	-1	-1664	-103	0.013533	-0.000414	-0.000038	507230	0.006102
	-10	14.707	675.9	0.5	-135	16509	-0.001099	-0.001099	-8321.58	922	0.001703
		0.002366	59.1	4.7	19.01	51				-131	0.26
37	0.011	0.007	0.607	10	9722	173	0.078709	0.079897	0.000064	9868	0.079897
17	4.6	0.07	294	-0.4	-1696	-225	0.013728	-0.000148	-0.000083	537634	0.006426
	-10	14.707	677.3	0.4	-69	17463	-0.00056	-0.00056	-24223.27	978	0.002059
		0.002367	59	4.7	11.47	18				-79	0.14
37	0.011	0.007	0.606	10	9934	459	0.080574	0.081746	0.000169	10078	0.081746
18	4.6	0.07	293.7	-0.4	-1701	-57	0.013798	-0.000403	-0.000021	544416	0.006526
	-10	14.707	676.6	0.4	-61	17701	-0.000497	-0.000497	-24301.68	990	0.002006
		0.002368	58.9	4.7	11.35	50				-78	0.14



RUN POINT	V/OR VKTS ALFS,U	MTUN QPSF BARO RHO	MTP RPM OMEG* R	THETA A1 B1 CONING	LIFTH,C DRAGH,C SIDEH,C SKANGLE	PITCHH,S ROLLH,S TORQ,C HFORCE	CLRH/S CXRH/S CYRH/S	CLRH/S CXRH/S CYRH/S	CMYHS/S CMXHS/S FE	THRUST POW HP VD	CTH/S CP/S CPO/S L/DR
53	0.25	0.151	0.606	7.9	9668	254	0.07911	0.0794	0.000094	9704	0.0794
5	100.1	33.51	293.6	-1.3	-829	-185	0.00678	-0.000141	-0.000069	343811	0.004159
	-5	14.771	676.4	5.5	-232	11182	-0.001897	-0.001897	-24.72	625	0.001528
		0.002348	60.9	4.8	82.31	17				-447	8.01
53	0.227	0.137	0.605	7.6	9659	305	0.079186	0.079473	0.000114	9694	0.079473
6	90.9	27.68	293.1	-1.5	-823	-230	0.006748	-0.000179	-0.000086	330068	0.004007
	-5	14.77	675.3	4.9	-245	10754	-0.002007	-0.002007	-29.74	600	0.001442
		0.002352	60.9	4.8	81.75	22				-467	7.27
53	0.2	0.121	0.605	7.4	9793	235	0.080086	0.080382	0.000087	9829	0.080382
7	80	21.47	293.2	-1.6	-843	-127	0.006893	-0.000113	-0.000047	328267	0.003974
	-5	14.77	675.5	4.5	-235	10691	-0.001923	-0.001923	-39.26	597	0.001396
		0.002356	60.9	4.9	80.78	14				-483	6.16
53	0.176	0.107	0.606	7.2	9768	351	0.079401	0.079678	0.00013	9802	0.079678
8	70.7	16.82	293.9	-1.8	-817	-222	0.006642	-0.000303	-0.000082	321909	0.003865
	-5	14.77	677.1	3.8	-260	10459	-0.002117	-0.002117	-48.58	585	0.001356
		0.002359	60.9	4.9	79.66	37				-450	5.2
53	0.15	0.091	0.606	7.1	9769	270	0.079238	0.079517	0.0001	9804	0.079517
9	60.2	12.19	294	-1.9	-820	-33	0.00665	-0.000281	-0.000012	325467	0.003897
	-5	14.77	677.3	3.4	-238	10571	-0.001933	-0.001933	-67.25	592	0.001334
		0.002363	60.8	4.9	77.72	35				-419	4.1
53	0.125	0.075	0.604	7.3	9777	361	0.079648	0.07991	0.000134	9809	0.07991
10	49.9	8.38	293.2	-2.1	-796	-112	0.006484	-0.000483	-0.000042	333239	0.004019
	-5	14.77	675.5	2.8	-272	10853	-0.002216	-0.002216	-94.93	606	0.001307
		0.002365	60.8	4.9	74.66	59				-358	3.09

RUN POINT	V/OR VKTS ALFS,U	MTUN QPSF BARO RHO	MTIP RPM OMEG*R TTEMPF	THETA		LIFTH,C		PITCHH,S		CLRH/S		CLRH/S		CMYHS/S		THRUST		CTHS	
				A1	B1	DRAGH,C	SIDEH,C	TORQ,C	HFORCE	CXRH/S	CYRH/S	CXRH/S	CYRH/S	CMXHS/S	FE	POW	HP	CPO/S	LDR
53	0.096	0.058	0.605	7.6	9713	163	0.078909	0.079179	0.00006	9746	0.079179	0.00006	0.00006	0.00006	0.00006	9746	0.079179	0.079179	
12	38.5	5	293.5	-2.4	-805	-85	0.00654	-0.000363	-0.000031	359934	-0.000363	-0.000031	-0.000031	-0.000031	-0.000031	359934	0.004325	0.004325	
	-5	14.77	676.2	2.3	-281	11711	-0.002285	-0.002285	-160.96	654	-0.002285	-0.002285	-0.002285	-160.96	-160.96	654	0.001273	0.001273	
		0.002367	60.9	4.8	68.77	45				-298						-298	2.05	2.05	
53	0.091	0.055	0.604	7.7	9778	258	0.079507	0.079765	0.000095	9810	0.079765	0.000095	0.000095	0.000095	0.000095	9810	0.079765	0.079765	
13	36.6	4.52	293.3	-2.5	-792	-150	0.006437	-0.000517	-0.000055	366339	-0.000517	-0.000055	-0.000055	-0.000055	-0.000055	366339	0.004408	0.004408	
	-5	14.769	675.7	2.2	-299	11927	-0.00243	-0.00243	-175.16	666	-0.00243	-0.00243	-0.00243	-175.16	-175.16	666	0.001234	0.001234	
		0.002368	60.7	4.8	67.26	64				-279						-279	1.9	1.9	
53	0.08	0.049	0.606	8	9833	274	0.079481	0.079733	0.000101	9864	0.079733	0.000101	0.000101	0.000101	0.000101	9864	0.079733	0.079733	
14	32.2	3.51	294.1	-2.5	-786	-116	0.006355	-0.000596	-0.000043	383981	-0.000596	-0.000043	-0.000043	-0.000043	-0.000043	383981	0.004581	0.004581	
	-5	14.769	677.6	1.9	-299	12468	-0.002416	-0.002416	-224.26	698	-0.002416	-0.002416	-0.002416	-224.26	-224.26	698	0.001128	0.001128	
		0.002369	60.6	4.8	63.26	74				-246						-246	1.57	1.57	
53	0.07	0.043	0.606	8.3	9806	333	0.079335	0.079576	0.000123	9835	0.079576	0.000123	0.000123	0.000123	0.000123	9835	0.079576	0.079576	
15	28.3	2.7	293.9	-2.6	-769	-210	0.006225	-0.000713	-0.000077	395610	-0.000713	-0.000077	-0.000077	-0.000077	-0.000077	395610	0.004727	0.004727	
	-5	14.769	677.1	1.6	-315	12854	-0.002552	-0.002552	-285.26	719	-0.002552	-0.002552	-0.002552	-285.26	-285.26	719	0.000948	0.000948	
		0.00237	60.5	4.8	58.85	88				-215						-215	1.3	1.3	
53	0.06	0.036	0.607	8.6	9874	315	0.079439	0.079684	0.000115	9905	0.079684	0.000115	0.000115	0.000115	0.000115	9905	0.079684	0.079684	
16	24	1.95	294.7	-2.6	-780	-263	0.006279	-0.000668	-0.000096	416111	-0.000668	-0.000096	-0.000096	-0.000096	-0.000096	416111	0.004931	0.004931	
	-5	14.769	678.9	1.4	-322	13483	-0.002588	-0.002588	-400.22	757	-0.002588	-0.002588	-0.002588	-400.22	-400.22	757	0.000605	0.000605	
		0.002371	60.5	4.8	52.84	83				-186						-186	1.04	1.04	
53	0.051	0.031	0.605	8.9	9807	350	0.079371	0.079614	0.000129	9837	0.079614	0.000129	0.000129	0.000129	0.000129	9837	0.079614	0.079614	
17	20.3	1.39	293.8	-2.4	-772	-196	0.006249	-0.000692	-0.000072	424001	-0.000692	-0.000072	-0.000072	-0.000072	-0.000072	424001	0.00507	0.00507	
	-5	14.768	676.9	1.1	-297	13781	-0.002401	-0.002401	-556.44	771	-0.002401	-0.002401	-0.002401	-556.44	-556.44	771	0.000726	0.000726	
		0.002371	60.5	4.8	46.7	86				-158						-158	0.84	0.84	

RUN POINT	V/OR VKTS ALFS,U	MTUN QPSF BARO RHO	MTIP RPM OMEG* R TTEMPF	THETA A1 B1 CONING	LIFTH,C DRAGH,C SIDEH,C SKANGLE	PITCHH,S ROLLH,S TORQ,C HFORCE	CLRHS CXRHS CYRHS	CLRHS/S CXRHS/S CYRHS/S	CMYHS/S CMXHS/S FE	THRUST POW HP VD	CTH/S CP/S CPO/S L/DR
53	0.041	0.025	0.606	9.2	9868	402	0.079736	0.079979	0.000148	9898	0.079979
18	16.3	0.9	294	-1.8	-775	-103	0.006262	-0.000711	-0.000038	442296	0.005277
	-5	14.769	677.3	0.9	-251	14366	-0.002029	-0.002029	-861.12	804	0.000902
		0.002372	60.5	4.8	39.01	88				-128	0.65
53	0.029	0.018	0.604	9.5	9801	328	0.079641	0.0799	0.000121	9833	0.0799
19	11.8	0.47	293.1	-1.5	-793	-169	0.006445	-0.000521	-0.000062	469060	0.005645
	-5	14.769	675.3	0.7	-205	15282	-0.001667	-0.001667	-1687.59	853	0.001277
		0.002373	60.3	4.7	29.29	64				-96	0.43
53	0.021	0.012	0.607	9.8	9885	248	0.079609	0.079883	0.000091	9919	0.079883
20	8.2	0.23	294.4	-1	-822	19	0.006622	-0.000342	0.000007	512527	0.006086
	-5	14.769	678.2	0.7	-140	16625	-0.001127	-0.001127	-3574.7	932	0.001719
		0.002373	60.3	4.7	20.83	42				-69	0.27
53	0.014	0.009	0.606	9.9	9781	430	0.078847	0.079123	0.000158	9815	0.079123
21	5.7	0.11	294.2	-0.5	-820	-72	0.00661	-0.000287	-0.000026	534658	0.006359
	-5	14.769	677.8	0.4	-82	17354	-0.000665	-0.000665	-7454.39	972	0.002055
		0.002374	60.1	4.6	14.65	36				-48	0.18
32	0	0	0.605	10.1	9848	114	0.080286	0.080324	0.000042	9852	0.080324
20	0	0	293.2	-0.1	-305	314	0.002484	-0.00032	0.000116	518183	0.006254
	-2	14.661	675.5	-0.2	9	16877	0.000077	0.000077	0	942	0.001852
		0.002363	58.4	4.8	0.04	39				0	0
32	0.02	0.012	0.606	9.8	9923	274	0.080676	0.080711	0.000101	9928	0.080711
21	8.1	0.22	293.5	-1.1	-296	-87	0.002403	-0.000414	-0.000032	504451	0.006065
	-2	14.662	676.2	0.7	-164	16413	-0.001332	-0.001332	-1343.65	917	0.001631
		0.002365	57.9	4.8	20.65	51				-24	0.27

RUN POINT	V/OR VKTS ALFS,U	MTUN QPSF BARO RHO	MTIP RPM OMEG* R	THETA		LIFTH,C DRAGH,C SIDEH,C SKANGLE	PITCHH,S ROLLH,S TORQ,C HFORCE		CLRH/S CXRH/S CYRH/S	CLRH/S CXRH/S CYRH/S	CLRH/S CXRH/S CYRH/S	CMYHS/S CMXHS/S FE	THRUST		CTH/S CP/S CPO/S LDR
				A1	B1								POW	HP	VD
32	0.04	0.024	0.606	9.2		9904	349		0.080608	0.080631	0.000129	0.000129	9907		0.080631
22	16.1	0.87	293.3	-2		-254	-113		0.002071	-0.000744	-0.000042	-0.000042	429532		0.005174
	-2	14.663	675.7	1		-265	13985		-0.002156	-0.002156	-292.45	-292.45	781		0.000746
		0.002366	57.7	4.9		39.29	91						-40		0.64
32	0.04	0.024	0.606	9.2		9896	354		0.080675	0.080698	0.000131	0.000131	9899		0.080698
23	16.1	0.87	293	-2		-253	-105		0.002064	-0.000753	-0.000039	-0.000039	428727		0.005178
	-2	14.663	675	1		-264	13973		-0.002155	-0.002155	-290.98	-290.98	780		0.000744
		0.002367	57.5	4.9		39.31	92						-40		0.64
32	0.06	0.036	0.603	8.4		9814	216		0.0806	0.080626	0.000081	0.000081	9817		0.080626
24	24	1.95	291.9	-2.8		-262	-173		0.002149	-0.000666	-0.000065	-0.000065	387615		0.004734
	-2	14.664	672.5	1.5		-329	12681		-0.0027	-0.0027	-134.15	-134.15	705		0.000579
		0.002367	57.3	4.9		54.61	81						-59		1.06
32	0.08	0.048	0.605	7.6		9845	306		0.080372	0.080393	0.000113	0.000113	9847		0.080393
25	32	3.45	292.9	-2.8		-244	-187		0.001992	-0.000814	-0.00007	-0.00007	351219		0.004249
	-2	14.664	674.8	1.8		-327	11451		-0.002671	-0.002671	-70.63	-70.63	639		0.001073
		0.002365	57.5	4.9		65.25	100						-67		1.57
32	0.1	0.061	0.607	7.1		9842	290		0.07987	0.079896	0.000107	0.000107	9846		0.079896
26	40	5.4	293.8	-2.6		-263	-166		0.002131	-0.000658	-0.000061	-0.000061	314801		0.003774
	-2	14.665	676.9	2.2		-300	10232		-0.002434	-0.002434	-48.63	-48.63	572		0.001172
		0.002365	57.3	5		72.22	81						-81		2.24
32	0.125	0.076	0.605	6.6		9836	411		0.080441	0.080465	0.000153	0.000153	9838		0.080465
27	50.1	8.44	292.8	-2.3		-256	-196		0.002097	-0.000711	-0.000073	-0.000073	280579		0.003402
	-2	14.666	674.6	2.6		-275	9151		-0.002248	-0.002248	-30.4	-30.4	510		0.001207
		0.002362	57.4	5		77.46	87						-80		3.21

RUN POINT	V/OR VKTS ALFS,U	MTUN QPSF BARO RHO	MTIP RPM OMEG* R	THETA A1 B1 CONING	LIFTH,C DRAGH,C SIDEH,C SKANGLE	PITCHH,S ROLLH,S TORQ,C HFORCE	CLRHS CXRHS CYRHS	CLRHS/S CXRHS/S CYRHS/S	CMYHS/S CMXHS/S FE	THRUST POW HP VD	CTH/S CPS CPO/S L/DR
32	0.201	0.122	0.605	6.3	9673	260	0.079663	0.079693	0.000097	9676	0.079693
28	80.4	21.65	292.3	-1.6	-275	-181	0.002266	-0.000516	-0.000068	240441	0.002941
	-2	14.666	673.4	4	-237	7855	-0.001951	-0.001951	-12.71	437	0.001306
		0.002354	57.3	5	83.83	63				-13	6.46
32	0.251	0.152	0.605	6.6	9668	204	0.080054	0.08008	0.000077	9671	0.08008
29	100.1	33.47	292.1	-1.3	-257	-168	0.002131	-0.000664	-0.000063	238975	0.00294
	-2	14.666	673	5	-251	7813	-0.002079	-0.002079	-7.69	434	0.001451
		0.002345	57.6	5	85.29	80				151	8.36
32	0.1	0.061	0.606	7.1	9851	103	0.080374	0.080408	0.000038	9855	0.080408
30	40	5.39	293	-2.4	-289	-76	0.002357	-0.00045	-0.000028	317966	0.003843
	-2	14.666	675	2.4	-287	10363	-0.002344	-0.002344	-53.59	578	0.001192
		0.002365	57.3	5	72.18	55				-92	2.23
32	0.08	0.049	0.603	7.6	9769	136	0.08027	0.080297	0.000051	9772	0.080297
31	32.1	3.46	291.9	-2.7	-264	-93	0.002172	-0.00063	-0.000035	349327	0.004268
	-2	14.665	672.5	2	-309	11428	-0.002537	-0.002537	-76.31	635	0.001099
		0.002366	57.3	4.9	65.43	77				-74	1.58
32	0.03	0.018	0.609	9.3	9817	187	0.079117	0.079146	0.000068	9820	0.079146
32	12.2	0.5	294.6	-1.6	-274	-131	0.002209	-0.000553	-0.000048	454796	0.005401
	-2	14.665	678.7	0.8	-229	14742	-0.001845	-0.001845	-548.26	827	0.001095
		0.002368	57.3	4.8	30.69	69				-34	0.45
35	0.251	0.152	0.605	6.8	9787	2	0.080374	0.0804	0.000001	9790	0.0804
5	99.4	33.62	290.7	-1.2	-263	-222	0.002158	-0.000662	-0.000083	246917	0.003028
	-2.01	14.756	669.7	5.2	-236	8111	-0.001935	-0.001935	-7.82	449	0.001523
		0.002387	52.3	5.1	85.26	81				145	8.1

RUN POINT	V/OR VKTS ALFS,U	MTUN QPSF BARO RHO	MTP RPM OMEG*R TTEMPF	THETA		LIFTH,C DRAGH,C SIDEH,C CONING SKANGLE	PITCHHS ROLLH,S TORQ,C HFORCE		CLRH/S CXRHS/S CYRHS/S	CLRHS/S CXRHS/S CYRHS/S	CMYHS/S CMXHS/S FE		THRUST		CTH/S CP/S CPO/S L/DR
				A1	B1								POW	HP	
35	0.222	0.134	0.605	6.6	9859	-11	0.080688	0.080721	-0.000004	9863	0.080721				
6	88.2	26.49	290.9	-1.4	-287	-169	0.002352	-0.000479	-0.000063	248078	0.00303				
	-2.01	14.756	670.2	4.7	-235	8144	-0.001927	-0.001927	-10.85	451	0.001411				
		0.002392	52.3	5.1	84.51	59				28	7.15				
35	0.198	0.12	0.606	6.4	9816	50	0.080038	0.080072	0.000018	9820	0.080072				
7	78.7	21.11	291.2	-1.7	-291	-263	0.002372	-0.000437	-0.000098	248632	0.003022				
	-2.01	14.756	670.9	4.2	-257	8153	-0.002098	-0.002098	-13.78	452	0.001342				
		0.002396	52.2	5.1	83.65	54				-30	6.2				
35	0.173	0.105	0.605	6.4	9829	23	0.080091	0.080128	0.000009	9834	0.080128				
8	68.7	16.14	291.1	-1.8	-301	-107	0.002453	-0.000358	-0.000039	256110	0.003112				
	-2.01	14.755	670.6	3.8	-239	8401	-0.001948	-0.001948	-18.65	466	0.001301				
		0.002399	52.2	5.1	82.34	44				-76	5.16				
35	0.151	0.092	0.605	6.4	9779	118	0.07967	0.079704	0.000044	9783	0.079704				
9	60.1	12.35	291	-2	-291	-109	0.00237	-0.000426	-0.00004	263287	0.0032				
	-2.01	14.755	670.4	3.3	-248	8640	-0.002023	-0.002023	-23.55	479	0.001272				
		0.002401	52.3	5.1	80.7	52				-89	4.24				
35	0.125	0.076	0.606	6.7	9898	136	0.080262	0.080296	0.00005	9902	0.080296				
10	49.8	8.51	291.5	-2.2	-292	-58	0.002369	-0.000447	-0.000021	288160	0.003479				
	-2.01	14.755	671.6	2.9	-265	9440	-0.00215	-0.00215	-34.34	524	0.001259				
		0.002404	52.2	5.1	77.48	55				-97	3.16				
35	0.102	0.062	0.605	7.1	9873	163	0.080267	0.080298	0.00006	9877	0.080298				
11	40.4	5.61	291	-2.5	-280	-94	0.00228	-0.000537	-0.000035	314400	0.003813				
	-2.01	14.755	670.4	2.4	-295	10317	-0.0024	-0.0024	-50.03	572	0.001214				
		0.002406	52.2	5	72.67	66				-88	2.28				

RUN POINT	V/OR VKTS ALFS,U	MTUN QPSF BARO RHO	MTTP RPM OMEG* R TTEMPF	THETA A1 B1 CONING	LIFTH,C DRAGH,C SIDEH,C SKANGLE	PITCHH,S ROLLH,S TORQ,C HFORCE	CLRH/S CXRH/S CYRH/S	CLRHS/S CXRHS/S CYRHS/S	CMYHS/S CMXHS/S FE	THRUST POW HP VD	CTHS/ CP/S CPO/S L/DR
35	0.092	0.055	0.604	7.4	9900	127	0.08058	0.08061	0.000047	9904	0.08061
12	36.4	4.54	290.8	-2.5	-282	-92	0.002292	-0.000535	-0.000034	333473	0.004051
	-2.01	14.754	670	2.2	-305	10951	-0.002487	-0.002487	-62.03	606	0.001193
		0.002407	52.2	5	69.61	66				-85	1.92
35	0.082	0.05	0.606	7.6	9853	188	0.079723	0.079749	0.000069	9856	0.079749
13	32.8	3.69	291.6	-2.7	-263	-163	0.002128	-0.00067	-0.00006	348482	0.004197
	-2.01	14.754	671.8	2	-325	11412	-0.00263	-0.00263	-71.27	634	0.001137
		0.002408	52.1	5	66.35	83				-74	1.63
35	0.072	0.043	0.607	8	9951	215	0.080292	0.080315	0.000079	9954	0.080315
14	28.6	2.8	292	-2.8	-254	-178	0.002049	-0.000768	-0.000065	375644	0.004505
	-2.01	14.754	672.7	1.7	-342	12285	-0.002761	-0.002761	-90.72	683	0.000995
		0.002408	52.2	5	61.26	95				-64	1.32
35	0.061	0.037	0.606	8.4	9948	246	0.080467	0.080489	0.00009	9951	0.080489
15	24.2	2	291.6	-2.8	-250	-179	0.002025	-0.000799	-0.000066	395367	0.00476
	-2.01	14.755	671.8	1.4	-342	12947	-0.002763	-0.002763	-125.09	719	0.000647
		0.002408	52.2	5	54.84	99				-56	1.05
35	0.052	0.031	0.606	8.7	9858	156	0.079669	0.079695	0.000057	9861	0.079695
16	20.5	1.45	291.7	-2.7	-264	-201	0.002137	-0.000659	-0.000074	406890	0.004893
	-2.01	14.755	672	1.3	-328	13320	-0.002649	-0.002649	-182.49	740	0.000542
		0.002409	52.2	4.9	48.74	82				-52	0.86
35	0.042	0.025	0.606	9.1	9893	316	0.08003	0.080049	0.000116	9895	0.080049
17	16.5	0.94	291.5	-2.3	-242	-172	0.001959	-0.000849	-0.000063	424172	0.00511
	-2.01	14.755	671.6	1	-294	13896	-0.002379	-0.002379	-258.3	771	0.000729
		0.00241	52.1	4.9	40.62	105				-39	0.66

RUN POINT	V/OR VKTS ALFS,U	MTUN QPSF BARO RHO	MTIP RPM OMEG*R TTEMPF	THETA A1 B1 CONING	LIFTH,C DRAGH,C SIDEH,C SKANGLE	PITCHH,S ROLLH,S TORQ,C HFORCE	CLRH/S CXRH/S CYRH/S	CLRHS/S CXRHS/S CYRHS/S	CMYHS/S CMXHS/S FE	THRUST POW HP VD	CTH/S CP/S CPO/S LDR
35	0.031	0.019	0.604	9.4	9828	153	0.079883	0.079912	0.000057	9832	0.079912
18	12.4	0.53	290.8	-1.7	-276	-176	0.002246	-0.000557	-0.000065	447487	0.005429
	-2.01	14.754	670	0.8	-240	14695	-0.00195	-0.00195	-521.33	814	0.00106
		0.00241	52.1	4.9	31.51	69				-35	0.47
35	0.031	0.019	0.604	9.4	9827	159	0.079985	0.080014	0.000059	9831	0.080014
19	12.3	0.52	290.6	-1.7	-275	-188	0.002242	-0.000565	-0.00007	446745	0.005431
	-2.01	14.754	669.5	0.8	-240	14680	-0.001954	-0.001954	-529.72	812	0.001054
		0.00241	52.1	4.9	31.24	69				-34	0.46
48	0.013	0.008	0.603	10.3	9842	30	0.080247	0.080247	0.000011	9842	0.080247
5	5.2	0.09	292.5	-0.3	32	-243	-0.000257	-0.000257	-0.00009	544484	0.006588
	0	14.754	673.9	0.3	-50	17776	-0.00041	-0.00041	350.88	990	0.002191
		0.002375	59.5	4.6	13.45	32				2	0.16
48	0.021	0.013	0.606	10.1	10217	520	0.082654	0.082654	0.000191	10217	0.082654
6	8.4	0.24	293.6	-0.8	139	34	-0.001121	-0.001121	0.000012	529818	0.006336
	0	14.754	676.4	0.3	-122	17232	-0.00099	-0.00099	577.15	963	0.001741
		0.002375	59.3	4.8	21.39	139				12	0.27
48	0.031	0.019	0.606	9.8	10348	307	0.083695	0.083695	0.000113	10348	0.083695
7	12.3	0.51	293.6	-1.4	124	-50	-0.001005	-0.001005	-0.000019	485660	0.005807
	0	14.754	676.4	0.7	-198	15796	-0.001604	-0.001604	243.69	883	0.001124
		0.002376	59.1	5	30.54	124				16	0.44
48	0.04	0.024	0.605	9.2	9912	267	0.080305	0.080305	0.000098	9912	0.080305
8	16	0.87	293.3	-2.2	110	-171	-0.000895	-0.000895	-0.000063	426773	0.005117
	0	14.754	675.7	1	-258	13895	-0.002089	-0.002089	126.92	776	0.000716
		0.002377	58.9	4.8	39.82	110				20	0.62



RUN POINT	V/OR VKTS	MTUN QPSF	MTIP RPM	THETA		LIFTH,C DRAGH,C	PITCHH,S ROLLH,S	CLRH/S CXRH/S	CLRHS/S CXRHS/S	CMYHS/S CMXHS/S	THRUST		CTH/S CP/S
				A1	B1						POW	HP	
	ALFS,U	BARO	OMEG*R	CONING	SKANGLE		TORQ,C	CYRH/S	CYRHS/S	FE	VD	L/DR	
		RHO	TTEMPF			HFORCE							
48	0.05	0.03	0.606	8.8	9901	161		0.079955	0.079955	0.000059	9901		0.079955
9	20.1	1.37	293.8	-2.7	87	-67		-0.000699	-0.000699	-0.000025	409320		0.004883
	0	14.754	676.9	1.4	-284	13304		-0.002295	-0.002295	63.28	744		0.000511
		0.002376	58.9	4.8	48.34	87					21		0.81
48	0.061	0.037	0.604	8.3	9857	297		0.080292	0.080292	0.00011	9857		0.080292
10	24.3	1.99	292.5	-3	107	-280		-0.000872	-0.000872	-0.000104	385459		0.004659
	0	14.754	673.9	1.5	-342	12584		-0.002788	-0.002788	53.75	701		0.000743
		0.002377	58.7	4.9	55.99	107					33		1.03
48	0.071	0.043	0.605	7.7	9835	343		0.079774	0.079774	0.000127	9835		0.079774
11	28.6	2.77	293.1	-2.9	110	-182		-0.000892	-0.000892	-0.000067	357051		0.004289
	0	14.754	675.3	1.6	-317	11633		-0.002572	-0.002572	39.7	649		0.001023
		0.002377	58.5	4.9	62.59	110					42		1.31
48	0.091	0.055	0.607	7	9896	301		0.079953	0.079953	0.000111	9896		0.079953
12	36.5	4.5	293.7	-2.7	74	-213		-0.000599	-0.000599	-0.000078	313179		0.00374
	0	14.753	676.6	2.1	-297	10183		-0.0024	-0.0024	16.48	569		0.001165
		0.002377	58.3	5	71.11	74					48		1.92
48	0.1	0.061	0.606	6.7	9861	302		0.079907	0.079907	0.000111	9861		0.079907
13	40	5.42	293.3	-2.7	64	-187		-0.000516	-0.000516	-0.000069	292201		0.003504
	0	14.753	675.7	2.2	-277	9514		-0.002248	-0.002248	11.74	531		0.001167
		0.002376	58.3	5	73.96	64					53		2.25
48	0.124	0.075	0.604	6.2	9808	275		0.080033	0.080033	0.000102	9808		0.080033
14	49.6	8.31	292.4	-2.3	47	-117		-0.000382	-0.000354	-0.000044	254463		0.003082
	0.02	14.753	673.6	2.7	-235	8310		-0.001919	-0.001919	5.63	463		0.001201
		0.002374	58.3	5	79.23	43					75		3.18

RUN POINT	V/OR VKTS ALFS,U	MTUN QPSF BARO RHO	MTIP RPM OMEG*R TTEMPF	THETA		LIFTH,C		PITCHH,S		CLRHS		CLRH/S		CMYHS/S		THRUST		C/H/S	
				A1	B1	DRAGH,C	SIDEH,C	TORQ,C	HFORCE	CLRHS/S	CXRHS/S	CYRHS/S	CMXHS/S	FE	VD	HP	CPO/S	L/DR	CP/S
48	0.15	0.091	0.606	5.9	9835			221		0.079852	0.079852	0.000081			9835		0.079852		
15	59.9	12.12	293.3	-2	35			-218		-0.000285	-0.000285	-0.000081			230373		0.002768		
	0	14.753	675.7	3.1	-233			7501		-0.001896	-0.001896	2.89			419		0.001217		
		0.002372	58.3	5.1	82.47			35							111		4.25		
48	0.2	0.121	0.606	5.6	9799			329		0.079954	0.079954	0.000122			9799		0.079954		
16	79.9	21.54	292.9	-1.6	60			-226		-0.000492	-0.000492	-0.000084			195903		0.002369		
	0	14.753	674.8	3.8	-222			6387		-0.00181	-0.00181	2.8			356		0.001272		
		0.002366	58.1	5.1	85.73			60							263		6.48		
48	0.251	0.152	0.604	5.8	9698			197		0.079969	0.079969	0.000074			9698		0.079969		
17	100.1	33.69	291.8	-1.2	49			-274		-0.000403	-0.000403	-0.000103			183104		0.002246		
	0	14.754	672.3	4.8	-229			5992		-0.001886	-0.001886	1.45			333		0.001396		
		0.002359	57.9	5.1	87.29			49							473		8.56		
48	0.251	0.152	0.605	5.8	9699			205		0.07979	0.07979	0.000077			9699		0.07979		
18	100.1	33.69	292.2	-1.2	50			-259		-0.000415	-0.000415	-0.000097			182881		0.002235		
	0	14.754	673.2	4.8	-232			5977		-0.00191	-0.00191	1.5			333		0.001391		
		0.002358	58.1	5.1	87.29			50							475		8.57		
48	0.2	0.121	0.605	5.7	9789			152		0.080118	0.080118	0.000056			9789		0.080118		
19	79.9	21.51	292.4	-1.6	39			-168		-0.000318	-0.000318	-0.000063			200093		0.002431		
	0	14.754	673.6	4	-229			6535		-0.001874	-0.001874	1.8			364		0.001295		
		0.002367	57.9	5.1	85.73			39							245		6.43		
48	0.151	0.091	0.606	5.9	9870			154		0.080085	0.080085	0.000057			9870		0.080085		
20	60.4	12.31	293.3	-2	33			-184		-0.000268	-0.000268	-0.000068			230912		0.002773		
	0	14.755	675.7	3.2	-254			7518		-0.002065	-0.002065	2.68			420		0.001222		
		0.002373	58	5.1	82.56			33							112		4.29		

RUN POINT	V/OR VKTS ALFS,U	MTUN QPSF BARO RHO	MTIP RPM OMEG*R TTEMPF	THETA A1 B1 CONING	LIFTH,C DRAGH,C SIDEH,C SKANGLE	PITCHH,S ROLLH,S TORQ,C HFORCE	CLRH/S CXRH/S CYRH/S	CLRHS/S CXRHS/S CYRHS/S	CMYHS/S CMXHS/S FE	THRUST POW HP VD	CTH/S CP/S CPO/S L/DR
48	0.125	0.076	0.605	6.2	9803	161	0.07986	0.07986	0.000059	9803	0.07986
21	50.1	8.5	292.5	-2.3	34	-30	-0.000279	-0.000279	-0.000011	254466	0.003076
	0	14.755	673.9	2.9	-247	8308	-0.002013	-0.002013	4.03	463	0.00121
		0.002377	57.8	5	79.44	34				71	3.22
48	0.102	0.062	0.605	6.7	9826	108	0.079959	0.079959	0.00004	9826	0.079959
22	40.7	5.62	292.5	-2.6	35	-124	-0.000285	-0.000285	-0.000046	291391	0.003519
	0	14.756	673.9	2.5	-287	9513	-0.002337	-0.002337	6.24	530	0.001203
		0.002379	57.7	5	74.51	35				43	2.3
48	0.102	0.062	0.605	6.7	9828	235	0.079748	0.079748	0.000087	9828	0.079748
23	40.7	5.61	292.9	-2.6	55	-115	-0.000449	-0.000449	-0.000043	289853	0.003485
	0	14.757	674.8	2.4	-281	9450	-0.002283	-0.002283	9.86	527	0.001193
		0.00238	57.7	5	74.48	55				51	2.3
48	0.091	0.055	0.605	7	9808	75	0.079583	0.079583	0.000028	9808	0.079583
24	36.5	4.51	292.8	-2.7	37	-113	-0.000297	-0.000297	-0.000042	311160	0.003743
	0	14.757	674.6	2.3	-290	10148	-0.002355	-0.002355	8.13	566	0.001174
		0.002381	57.5	4.9	71.29	37				34	1.93
48	0.071	0.043	0.605	7.8	9856	256	0.08	0.08	0.000094	9856	0.08
25	28.2	2.71	292.6	-2.9	95	-192	-0.000772	-0.000772	-0.000071	361337	0.004351
	0	14.758	674.1	1.6	-329	11793	-0.002667	-0.002667	35.13	657	0.00102
		0.002384	57.3	4.9	62.12	95				37	1.28
48	0.061	0.037	0.606	8.2	9828	158	0.07937	0.07937	0.000058	9828	0.07937
26	24.4	2.02	293.3	-2.9	83	-244	-0.000672	-0.000672	-0.000089	384645	0.004597
	0	14.759	675.7	1.5	-342	12523	-0.002765	-0.002765	41.13	699	0.000772
		0.002384	57.3	4.9	56.36	83				27	1.04

RUN POINT	V/OR VKTS ALFS,U	MTUN QPSF BARO RHO	MTIP RPM OMEG*R TTEMPF	THETA		LIFTH,C		PITCHH,S		CLRH/S		CLRH/S		CMYHS/S		THRUST		CTH/S	
				A1	B1	DRAGH,C	SIDEH,C	ROLLH,S	TORQ,C	CXRH/S	CYRH/S	CXRH/S	CYRH/S	CMXHS/S	FE	POW	HP	CP/S	LDR
				CONING		SKANGLE		HFORCE									VD		
48	0.051	0.031	0.607	8.6		9878		133		0.079627	0.079627	0.079627	0.079627	0.000049		9878		0.079627	
27	20.4	1.42	293.5	-2.8		77		-234		-0.000624	-0.000624	-0.000624	-0.000624	-0.000086		406372		0.004844	
	0	14.758	676.2	1.4		-327		13222		-0.002637	-0.002637	-0.002637	-0.002637	54.54		739		0.000499	
		0.002386	57.1	4.9		49.12		77								20		0.83	
48	0.041	0.025	0.606	9		9812		248		0.0794	0.0794	0.0794	0.0794	0.000091		9812		0.0794	
28	16.4	0.91	292.9	-2.1		96		-193		-0.000778	-0.000778	-0.000778	-0.000778	-0.000071		421620		0.005056	
	0	14.759	674.8	1		-273		13746		-0.002209	-0.002209	-0.002209	-0.002209	105.72		767		0.000729	
		0.002386	57.1	4.8		40.8		96								18		0.64	
48	0.031	0.019	0.604	9.4		9918		232		0.080542	0.080542	0.080542	0.080542	0.000085		9918		0.080542	
29	12.4	0.52	292.3	-1.6		89		-266		-0.000722	-0.000722	-0.000722	-0.000722	-0.000098		454590		0.005482	
	0	14.76	673.4	0.7		-235		14851		-0.001911	-0.001911	-0.001911	-0.001911	171.05		827		0.001061	
		0.002387	56.9	4.9		31.44		89								12		0.45	
48	0.021	0.013	0.605	9.8		9899		131		0.08018	0.08018	0.08018	0.08018	0.000048		9899		0.08018	
30	8.4	0.24	292.6	-1.2		53		-272		-0.000433	-0.000433	-0.000433	-0.000433	-0.0001		501694		0.006028	
	0	14.76	674.1	0.6		-177		16373		-0.001433	-0.001433	-0.001433	-0.001433	222.6		912		0.001638	
		0.002389	56.7	4.8		21.72		53								5		0.28	
48	0.012	0.007	0.606	10.2		10060		166		0.0812	0.0812	0.0812	0.0812	0.000061		10060		0.0812	
31	4.8	0.08	293.1	0.1		53		14		-0.000432	-0.000432	-0.000432	-0.000432	0.000005		546297		0.00653	
	0	14.76	675.3	0.3		-14		17799		-0.000115	-0.000115	-0.000115	-0.000115	668.74		993		0.002055	
		0.002389	56.7	4.8		12.55		53								3		0.15	
39	0.25	0.151	0.605	3.9		9689		114		0.079612	0.079612	0.079612	0.079612	0.000043		9736		0.079999	
6	99.3	33.37	291.4	-1.1		963		-186		-0.00791	-0.00791	-0.00791	-0.00791	-0.000069		27406		0.000335	
	5	14.766	671.3	3.9		-255		898		-0.002096	-0.002096	-0.002096	-0.002096	28.84		50		0.001362	
		0.002374	55	5.2		92.24		115								1402		8.6	

RUN POINT	V/OR VKTS ALFS,U	MTUN QPSF BARO RHO	MTIP RPM OMEG* R	THETA A1 B1 CONING	LIFTH,C DRAGH,C SIDEH,C SKANGLE	PITCHH,S ROLLH,S TORQ,C HFORCE	CLR/H/S CXRH/S CYRH/S	CLRHS/S CXRHS/S CYRHS/S	CMYHS/S CMXHS/S FE	THRUST POW HP VD	CTH/S CP/S CPO/S L/DR
39	0.223	0.135	0.607	4	9804	-82	0.07988	0.080227	-0.000031	9847	0.080227
7	89	26.81	292.4	-1.3	916	-86	-0.007466	-0.000476	-0.000032	53568	0.000648
	5	14.766	673.6	3.8	-237	1749	-0.001933	-0.001933	34.18	97	0.001242
		0.002378	55.1	5.2	91.53	58				1129	7.7
39	0.198	0.12	0.606	4.1	9834	107	0.08022	0.080578	0.00004	9878	0.080578
8	78.9	21.14	292	-1.5	932	-120	-0.007605	-0.000584	-0.000045	70405	0.000854
	5	14.765	672.7	3.3	-238	2302	-0.001938	-0.001938	44.1	128	0.001145
		0.002382	55.1	5.2	90.58	72				957	6.73
39	0.174	0.105	0.606	4.2	9866	91	0.080262	0.080605	0.000034	9908	0.080605
9	69.3	16.3	292.2	-1.7	915	-77	-0.007441	-0.000418	-0.000029	95800	0.001158
	5	14.765	673.2	2.9	-233	3131	-0.001895	-0.001895	56.12	174	0.001063
		0.002385	55.1	5.2	89.24	51				784	5.69
39	0.151	0.091	0.605	4.5	9848	167	0.080142	0.080486	0.000062	9890	0.080486
10	60.1	12.26	292	-1.9	914	-42	-0.007437	-0.000424	-0.000015	122920	0.001487
	5	14.764	672.7	2.6	-228	4020	-0.001858	-0.001858	74.52	223	0.001013
		0.002387	55.1	5.1	87.37	52				651	4.63
39	0.124	0.075	0.607	4.9	9847	131	0.07957	0.079896	0.000048	9887	0.079896
11	49.7	8.39	292.9	-2.4	893	-116	-0.007217	-0.000255	-0.000043	166068	0.001989
	5	14.764	674.8	2.4	-256	5414	-0.002069	-0.002069	106.4	302	0.000979
		0.002389	55.2	5.1	83.92	32				505	3.43
39	0.101	0.061	0.606	5.7	9872	193	0.07991	0.080237	0.000071	9912	0.080237
12	40.3	5.53	292.5	-2.8	894	-44	-0.007237	-0.000245	-0.000016	217377	0.002611
	5	14.764	673.9	2.2	-278	7097	-0.002247	-0.002247	161.56	395	0.000976
		0.002392	55.1	5	78.51	30				395	2.41

RUN POINT	V/OR VKTS ALFS,U	MTUN QPSF BARO RHO	MTIP RPM OMEG*R TTEMPF	THETA		LIFTH,C DRAGH,C SIDEH,C SKANGLE	PITCHH,S ROLLH,S TORQ,C HFORCE		CLRH/S CXRH/S CYRH/S	CLRHS/S CXRHS/S CYRHS/S	CMYHS/S CMXHS/S FE	THRUST		CTH/S CP/S CPO/S L/DR
				A1	B1							POW	HP	VD
39	0.091	0.055	0.605	6.1		9860	177		0.080179	0.080503	0.000066	9900		0.080503
13	36.3	4.48	291.8	-3.1		888	-120		-0.007222	-0.000207	-0.000044	243510		0.002946
	5	14.763	672.3	2.1		-307	7969		-0.002494	-0.002494	198.31	443		0.000961
		0.002392	55.1	5		75.08	25					349		2.03
39	0.081	0.049	0.606	6.6		9980	243		0.080641	0.080979	0.000089	10022		0.080979
14	32.3	3.56	292.7	-3.1		917	-8		-0.007405	-0.000349	-0.000003	279360		0.003347
	5	14.763	674.3	2		-312	9114		-0.002524	-0.002524	257.67	508		0.000938
		0.002393	55.1	5		70.57	43					313		1.65
39	0.071	0.043	0.605	7.1		9858	161		0.080016	0.080346	0.000059	9899		0.080346
15	28.3	2.74	292	-3.4		898	-71		-0.007286	-0.000285	-0.000026	308633		0.003724
	5	14.763	672.7	1.9		-348	10093		-0.002826	-0.002826	327.85	561		0.000874
		0.002394	55.1	5		65.43	35					270		1.34
39	0.041	0.025	0.604	9.1		10025	316		0.081493	0.081872	0.000117	10072		0.081872
16	16.2	0.9	291.7	-2.7		973	-60		-0.007908	-0.000776	-0.000022	411712		0.00498
	5	14.763	672	1		-333	13478		-0.002709	-0.002709	1080.94	749		0.00045
		0.002395	55.1	5		41.33	95					161		0.63
39	0.03	0.018	0.608	9.3		9981	334		0.080194	0.080573	0.000122	10028		0.080573
17	12	0.49	293.4	-1.9		977	-143		-0.00785	-0.000831	-0.000052	440182		0.005232
	5	14.762	675.9	0.7		-263	14327		-0.002114	-0.002114	1994.02	800		0.000809
		0.002395	55.1	4.9		31.05	103					119		0.44
39	0.021	0.012	0.605	9.6		9856	197		0.079837	0.08019	0.000073	9900		0.08019
18	8.2	0.23	292.2	-1.5		930	-179		-0.007531	-0.000545	-0.000066	479444		0.005769
	5	14.762	673.2	0.6		-206	15669		-0.001666	-0.001666	4042.52	872		0.001377
		0.002395	55.1	4.8		21.55	67					78		0.28

RUN POINT	V/OR VKTS ALFS,U	MTUN QPSF BARO RHO	MTIP RPM OMEG*R TTEMPF	THETA A1 B1 CONING	LIFTH,C DRAGH,C SIDEH,C SKANGLE	PITCHH,S ROLLH,S TORQ,C HFORCE	CLRH/S CXRH/S CYRH/S	CLRHS/S CXRHS/S CYRHS/S	CMYHS/S CMXHS/S FE	THRUST POW HP VD	CTH/S CP/S CPO/S L/DR
39	0.011	0.006	0.606	10.3	10004	45	0.080809	0.08113	0.000016	10044	0.08113
19	4.2	0.06	292.6	-0.3	893	-87	-0.007212	-0.000142	-0.000032	545365	0.006535
	5	14.762	674.1	0.6	-75	17799	-0.00061	-0.00061	14880.97	992	0.002066
		0.002395	55.1	4.9	10.94	18				38	0.13
39	0.011	0.006	0.606	10.3	10018	-126	0.081071	0.081376	-0.000046	10056	0.081376
20	4.2	0.06	292.3	-0.3	870	-134	-0.007043	0.00005	-0.000049	548310	0.006589
	5	14.762	673.4	0.6	-73	17913	-0.000591	-0.000591	14504.61	997	0.0021
		0.002396	55	4.9	10.93	-6				37	0.13
41	0.252	0.152	0.605	2.4	10006	104	0.082197	0.083611	0.000039	10178	0.083611
5	100.1	33.86	291.6	-0.8	1866	-17	-0.015332	-0.000826	-0.000006	-106268	-0.001299
	10	14.752	671.8	3.6	-283	-3480	-0.002322	-0.002322	55.12	-193	0.001553
		0.002371	55.2	5.6	97.17	101				2246	8.09
41	0.23	0.139	0.606	2.4	9815	37	0.080264	0.081639	0.000014	9983	0.081639
6	91.6	28.37	292	-1	1828	4	-0.014945	-0.000781	0.000002	-79467	-0.000966
	10	14.752	672.7	3.4	-259	-2599	-0.002118	-0.002118	64.43	-144	0.001418
		0.002376	55.1	5.4	96.68	95				2000	7.47
41	0.2	0.122	0.608	2.5	9655	84	0.078283	0.079632	0.000031	9821	0.079632
7	80.1	21.75	293	-1.3	1803	-39	-0.014621	-0.000805	-0.000014	-42234	-0.000507
	10	14.753	675	2.9	-240	-1376	-0.001946	-0.001946	82.92	-77	0.001277
		0.00238	55.2	5.3	95.72	99				1696	6.48
41	0.179	0.108	0.605	2.8	9676	119	0.079088	0.080441	0.000044	9841	0.080441
8	71.1	17.17	291.6	-1.5	1800	32	-0.01471	-0.000753	0.000012	-10070	-0.000123
	10	14.753	671.8	2.6	-215	-330	-0.001755	-0.001755	104.81	-18	0.001197
		0.002383	55.1	5.3	94.54	92				1462	5.64

RUN POINT	V/OR VKTS ALFS,U	MTUN QPSF BARO RHO	MTIP RPM OMEG*R TTEMPF	THETA		LIFTH,C A1 DRAGH,C B1 SIDEH,C CONING SKANGLE	PITCHH,S ROLLH,S TORQ,C HFORCE		CLRH/S CXRH/S CYRH/S	CLRHS/S CXRHS/S CYRHS/S	CMYHS/S CMXHS/S FE		THRUST			CTH/S CP/S CPO/S L/DR			
				3.3	9808		63						9971	POW HP VD					
41	0.151	0.091	0.607	3.3	9808		63	0.079405	0.080728	0.000023			9971	0.080728					
9	60.2	12.33	292.8	-1.7	1799		-4	-0.014564	-0.000555	-0.000002			36379	0.000437					
	10	14.753	674.6	2.2	-210		1186	-0.001697	-0.001697	145.85			66	0.001067					
		0.002387	55.1	5.3	92.26		69						1188	4.55					
41	0.125	0.076	0.605	3.8	9745		120	0.079292	0.08061	0.000044			9907	0.08061					
10	49.8	8.46	291.9	-2.1	1785		-86	-0.014524	-0.000535	-0.000032			81069	0.000981					
	10	14.754	672.5	1.8	-215		2652	-0.001748	-0.001748	211.11			147	0.000918					
		0.002389	55.1	5.2	88.73		66						959	3.55					
41	0.101	0.061	0.607	4.6	9798		145	0.079113	0.080406	0.000053			9959	0.080406					
11	40.3	5.52	292.9	-2.7	1780		-34	-0.014369	-0.000413	-0.000012			144995	0.001735					
	10	14.755	674.8	1.8	-231		4727	-0.001864	-0.001864	322.18			264	0.000858					
		0.002391	55.1	5.1	82.77		51						755	2.5					
41	0.091	0.055	0.605	5.1	9797		230	0.07962	0.08092	0.000085			9957	0.08092					
12	36.4	4.52	291.9	-3.1	1778		-67	-0.014453	-0.000407	-0.000025			177063	0.00214					
	10	14.756	672.5	1.8	-260		5792	-0.00211	-0.00211	393.49			322	0.000867					
		0.002392	55.1	5.1	79.21		50						678	2.1					
41	0.081	0.049	0.607	5.7	9812		316	0.079014	0.080306	0.000116			9972	0.080306					
13	32.3	3.56	293.2	-3.3	1782		-49	-0.014352	-0.000413	-0.000018			217333	0.002591					
	10	14.755	675.5	1.8	-284		7078	-0.002285	-0.002285	501.03			395	0.000857					
		0.002393	55.1	5.1	74.29		51						598	1.7					
41	0.041	0.025	0.604	8.7	9755		176	0.079246	0.080581	0.000065			9919	0.080581					
14	16.2	0.9	291.8	-3.3	1800		-151	-0.01462	-0.000637	-0.000056			391102	0.004726					
	10	14.756	672.3	1.1	-378		12799	-0.003068	-0.003068	1999.67			711	0.000302					
		0.002395	55.1	5	42.59		78						300	0.61					



RUN POINT	V/OR VKTS ALFS,U	MTUN QPSF BARO RHO	MTIP RPM OMEG* R	THETA A1 B1 CONING	LIFTH,C DRAGH,C SIDEH,C SKANGLE	PITCHH,S ROLLH,S TORQ,C HFORCE	CLRH/S CXRH/S CYRH/S	CLRHS/S CXRHS/S CYRHS/S	CMYHS/S CMXHS/S FE	THRUST POW HP VD	CTH/S CP/S CPO/S L/DR
41	0.029	0.018	0.605	9.2	9721	102	0.0789	0.080226	0.000038	9884	0.080226
15	11.6	0.46	291.9	-2.1	1792	-162	-0.014543	-0.000621	-0.00006	422448	0.005099
	10	14.757	672.5	0.9	-284	13820	-0.002305	-0.002305	3895.2	768	0.000704
		0.002395	55.1	4.9	30.71	77				214	0.42
41	0.019	0.011	0.609	9.7	9964	90	0.079762	0.081095	0.000033	10130	0.081095
16	7.5	0.19	293.9	-1.6	1830	-176	-0.014652	-0.000579	-0.000064	492878	0.005827
	10	14.758	677.1	0.7	-217	16014	-0.001735	-0.001735	9633.53	896	0.001361
		0.002396	55.1	4.9	19.44	72				137	0.24
41	0	0	0.606	10	9962	213	0.080442	0.081806	0.000078	10131	0.081806
17	0	0	292.6	-0.8	1844	325	-0.014889	-0.000695	0.000119	518136	0.006207
	10	14.759	674.1	0.4	-67	16910	-0.000545	-0.000545	0	942	0.001682
		0.002396	55.1	4.9	0.04	86				0	0
41	0.01	0.006	0.606	10	9578	-61	0.07735	0.078567	-0.000023	9729	0.078567
18	4.2	0.06	292.6	-0.5	1706	-118	-0.013777	-0.000136	-0.000043	519108	0.006219
	10	14.759	674.1	0.6	-94	16942	-0.000757	-0.000757	28433.23	944	0.00196
		0.002396	55.1	4.7	11.08	17				74	0.13
31	0.251	0.152	0.606	2.2	9903	24	0.081342	0.082746	0.000009	10074	0.082746
17	100.1	33.61	292.6	-0.9	1851	-48	-0.015201	-0.00083	-0.000018	-107046	-0.001304
	10.01	14.716	674.1	3.6	-305	-3494	-0.002503	-0.002503	55.07	-195	0.001517
		0.002356	57.1	5.6	97.19	101				2249	8.14
31	0.201	0.121	0.605	2.8	9995	178	0.082032	0.083472	0.000067	10170	0.083472
18	80	21.56	292.2	-1.3	1885	-29	-0.01547	-0.000976	-0.000011	-47442	-0.000578
	10.01	14.717	673.2	2.8	-256	-1550	-0.002101	-0.002101	87.42	-86	0.001271
		0.002364	57.1	5.6	95.54	119				1699	6.52

RUN POINT	V/OR VKTS ALFS,U	MTUN QPSF BARO RHO	MTIP RPM OMEG*R TTEMPF	THETA		LIFTH,C A1 DRAGH,C B1 SIDEH,C CONING SKANGLE	PTCHH,S ROLLH,S TORQ,C HFORCE		CLR/S CXR/S CYR/S	CLRHS/S CXRHS/S CYRHS/S	CMYHS/S CMXHS/S FE	THRUST		CTH/S CP/S CPO/S LDR
												POW	HP	VD
31	0.151	0.092	0.606	3.5	10167	153	0.08283	0.084241	0.000057	10341	0.084241			
19	60.5	12.38	292.8	-1.8	1887	-25	-0.01537	-0.000739	-0.000009	33791	0.000408			
	10.01	14.716	674.6	2.2	-222	1102	-0.00181	-0.00181	152.45	61	0.001041			
		0.002372	56.7	5.5	92	91				1203	4.59			
31	0.125	0.076	0.605	4.1	10133	118	0.082745	0.08413	0.000044	10303	0.08413			
20	49.9	8.41	292.3	-2.2	1863	-125	-0.015215	-0.000601	-0.000046	84469	0.001024			
	10.01	14.715	673.4	1.9	-230	2760	-0.001876	-0.001876	221.43	154	0.000878			
		0.002374	56.7	5.5	88.23	74				961	3.53			
31	0.1	0.061	0.607	5	10218	154	0.082621	0.083976	0.000057	10386	0.083976			
21	40.1	5.45	293.5	-2.8	1859	-39	-0.01503	-0.00044	-0.000014	158302	0.001893			
	10.01	14.715	676.2	1.9	-246	5151	-0.001986	-0.001986	340.95	288	0.000849			
		0.002378	56.3	5.4	81.85	54				752	2.43			
31	0.08	0.048	0.605	6	10179	228	0.082869	0.084211	0.000084	10344	0.084211			
22	32	3.46	292.5	-3.3	1839	-72	-0.014974	-0.000342	-0.000027	229408	0.002771			
	10.01	14.714	673.9	1.9	-304	7490	-0.002472	-0.002472	530.88	417	0.000765			
		0.002378	56.5	5.3	72.92	42				589	1.67			
37	0.252	0.152	0.604	11.9	11846	340	0.098209	0.09972	0.000128	12029	0.09972			
19	100.4	33.65	291.9	-2.2	-2086	-304	0.017297	-0.00002	-0.000114	641045	0.007903			
	-10	14.708	672.5	6.9	-334	20971	-0.002765	-0.002765	-62.01	1166	0.002114			
		0.002345	58.9	5.7	76.76	2				-1429	6.98			
37	0.2	0.121	0.607	11	12152	222	0.099149	0.100693	0.000082	12341	0.100693			
20	80.1	21.49	293.7	-2.3	-2153	-407	0.017568	0.000084	-0.000151	595494	0.007181			
	-10	14.708	676.6	5.5	-363	19362	-0.002963	-0.002963	-100.2	1083	0.001831			
		0.002354	58.8	5.8	74.87	-10				-1250	5.39			

RUN POINT	V/OR VKTS ALFS,U	MTUN QPSF BARO RHO	MTIP RPM OMEG*R TTEMPF	THETA A1 B1 CONING	LIFTH,C DRAGH,C SIDEH,C SKANGLE	PITCHH,S ROLLH,S TORQ,C HFORCE	CLRH/S CXRH/S CYRH/S	CLRHS/S CXRHS/S CYRHS/S	CMYHS/S CMXHS/S FE	THRUST POW HP VD	CTH/S CP/S CPO/S L/DR
37	0.151	0.091	0.605	10.5	12100	235	0.099129	0.100604	0.000087	12280	0.100604
21	60.2	12.17	292.7	-2.4	-2096	-222	0.017169	-0.000306	-0.000083	550448	0.006687
	-10	14.707	674.3	4.1	-350	17958	-0.002868	-0.002868	-172.2	1001	0.001661
		0.00236	58.7	5.9	71.31	37				-969	3.64
37	0.125	0.076	0.604	10.4	12134	251	0.099324	0.100762	0.000093	12310	0.100762
22	49.9	8.39	292.6	-2.4	-2074	-232	0.016973	-0.000533	-0.000086	549866	0.006677
	-10	14.708	674.1	3.4	-371	17945	-0.00304	-0.00304	-247.02	1000	0.001604
		0.002364	58.5	5.9	67.87	65				-811	2.73
37	0.101	0.061	0.604	10.6	12090	259	0.098888	0.100291	0.000096	12262	0.100291
23	40.3	5.47	292.6	-2.5	-2046	-258	0.016732	-0.000693	-0.000096	559742	0.006792
	-10	14.707	674.1	2.8	-388	18268	-0.003172	-0.003172	-373.83	1018	0.001479
		0.002366	58.5	5.9	62.79	85				-660	1.96
37	0.091	0.055	0.604	10.7	12064	198	0.09887	0.100286	0.000074	12236	0.100286
24	36.4	4.48	292.2	-2.5	-2050	-198	0.016803	-0.000621	-0.000074	566562	0.006898
	-10	14.707	673.2	2.7	-373	18516	-0.003058	-0.003058	-457.77	1030	0.001361
		0.002367	58.3	5.9	60	76				-603	1.68
37	0.081	0.049	0.608	10.8	12171	210	0.098391	0.099795	0.000077	12345	0.099795
25	32.4	3.55	294.1	-2.5	-2065	-222	0.016696	-0.000643	-0.000082	586173	0.006994
	-10	14.708	677.6	2.4	-379	19033	-0.003067	-0.003067	-582.32	1066	0.001162
		0.002369	58.1	5.8	56.29	79				-538	1.41
37	0.06	0.036	0.605	11.3	12140	276	0.099036	0.100432	0.000102	12311	0.100432
26	24	1.95	292.7	-2.5	-2048	-309	0.016709	-0.000743	-0.000115	606923	0.007343
	-10	14.708	674.3	1.7	-378	19801	-0.003081	-0.003081	-1050.22	1103	0.001187
		0.00237	58.1	5.9	46.42	91				-400	0.94

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RUN POINT	V/OR VKTS ALFS,U	MTUN QPSF BARO RHO	MTIP RPM OMEG*R TTEMPF	THETA		LIFTH,C DRAGH,C SIDEH,C CONING	SKANGLE		PITCHH,S ROLLH,S TORQ,C HFORCE	CLRH/S CXRH/S CYRH/S	CLRHS/S CXRHS/S CYRHS/S	CMYHS/S CMXHS/S FE	THRUST		CTH/S CP/S CPO/S LDR
				A1	B1		SK	ANGL					POW	HP	VD
37	0.05	0.03	0.604	11.5	12125	198				0.099082	0.100496	0.000074	12298		0.100496
27	20.1	1.37	292.4	-2.2	-2058	-228				0.016814	-0.000646	-0.000085	616749		0.007482
	-10	14.708	673.6	1.6	-336	20142				-0.002744	-0.002744	-1505.08	1121		0.00132
		0.002371	58	5.8	40.57	79							-338		0.75
37	0.041	0.025	0.605	11.6	12124	243				0.098616	0.100026	0.00009	12298		0.100026
28	16.3	0.9	293.1	-1.9	-2059	-252				0.016747	-0.000632	-0.000093	635091		0.00765
	-10	14.708	675.3	1.3	-300	20691				-0.002443	-0.002443	-2287.74	1155		0.001532
		0.002371	58.1	5.8	34.12	78							-275		0.58
37	0.03	0.018	0.604	11.9	12120	258				0.099063	0.100486	0.000096	12294		0.100486
29	11.8	0.47	292.4	-1.2	-2063	-219				0.016863	-0.000595	-0.000081	671089		0.008143
	-10	14.709	673.6	1	-226	21917				-0.001846	-0.001846	-4389.71	1220		0.001982
		0.00237	58.2	5.8	25.57	73							-200		0.38
37	0.02	0.012	0.605	12.2	12180	228				0.099144	0.10059	0.000084	12358		0.10059
30	7.9	0.21	293	-1	-2089	8				0.017004	-0.00047	0.000003	719625		0.008678
	-10	14.709	675	0.8	-148	23454				-0.001205	-0.001205	-9947.73	1308		0.002508
		0.00237	58.2	5.7	17.49	58							-135		0.23
37	0.013	0.008	0.606	12.4	12163	217				0.098759	0.100229	0.00008	12344		0.100229
31	5.2	0.09	293.3	0	-2107	23				0.017104	-0.000305	0.000008	744972		0.008952
	-10	14.709	675.7	0.5	-25	24255				-0.000201	-0.000201	-23405.73	1354		0.002815
		0.002372	58	5.7	11.62	38							-89		0.15
33	0.251	0.152	0.606	8.8	12113	39				0.100112	0.100158	0.000015	12119		0.100158
5	100.1	33.54	292.1	-1.7	-372	-283				0.003076	-0.000419	-0.000106	328291		0.004032
	-2	14.658	673	6.2	-360	10732				-0.002976	-0.002976	-11.1	597		0.001767
		0.002349	56.5	6.1	84.62	51							25		7.71

RUN POINT	V/OR VKTS ALFS,U	MTUN QPSF BARO RHO	MTIP RPM OMEG*R TTEMPF	THETA		LIFTH,C DRAGH,C SIDEH,C SKANGLE	PITCHH,S ROLLH,S TORQ,C HFORCE		CLRH/S CXRH/S CYRH/S	CLRHS/S CXRHS/S CYRHS/S	CMYHS/S CMXHS/S FE	THRUST		CTH/S CP/S CPO/S LDR
				A1	B1							POW	HP	
33	0.201	0.122	0.606	8.5		12217	31		0.100315	0.100369	0.000012	12224		0.100369
6	80.2	21.58	292.5	-2.2		-403	-364		0.003306	-0.000197	-0.000136	336326		0.004098
	-2	14.658	673.9	5.1		-372	10980		-0.003051	-0.003051	-18.65	612		0.00156
		0.002358	56.3	6.1		82.74	24					-95		5.86
33	0.15	0.091	0.607	8.6		12287	60		0.100324	0.100376	0.000022	12293		0.100376
7	60	12.13	293	-2.5		-398	-218		0.00325	-0.000254	-0.000081	369478		0.004469
	-2	14.657	675	4.1		-367	12042		-0.002995	-0.002995	-32.81	672		0.001474
		0.002363	56.5	6.1		78.77	31					-125		3.78
33	0.126	0.076	0.606	8.9		12332	192		0.100869	0.100913	0.000071	12338		0.100913
8	50.2	8.48	292.6	-2.7		-370	-130		0.003028	-0.000494	-0.000048	399096		0.004842
	-2	14.657	674.1	3.5		-378	13025		-0.00309	-0.00309	-43.68	726		0.001432
		0.002366	56.5	6.1		75.08	60					-111		2.84
33	0.107	0.064	0.605	9.2		12170	129		0.099737	0.099783	0.000048	12175		0.099783
9	42.5	6.09	292.1	-2.9		-371	-150		0.00304	-0.000442	-0.000056	425619		0.005183
	-2	14.656	673	3.1		-403	13914		-0.003305	-0.003305	-60.94	774		0.001367
		0.002369	56.1	6		70.91	54					-105		2.19
33	0.06	0.036	0.608	10.6		12300	405		0.09944	0.099461	0.000149	12302		0.099461
10	24	1.95	293.9	-2.9		-289	-172		0.002338	-0.001134	-0.000063	543059		0.006484
	-2	14.655	677.1	1.6		-440	17645		-0.003555	-0.003555	-148.26	987		0.000418
		0.002372	56	5.9		50.21	140					-53		0.94
33	0.05	0.03	0.607	11.1		12299	368		0.099999	0.100022	0.000136	12302		0.100022
11	20	1.36	292.9	-2.6		-295	-150		0.002401	-0.00109	-0.000055	568323		0.006848
	-2	14.654	674.8	1.4		-408	18529		-0.003315	-0.003315	-217.66	1033		0.00073
		0.002375	55.5	5.9		43.35	134					-46		0.74

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RUN POINT	V/OR VKTS ALFS,U	MTUN QPSF BARO RHO	MTIP RPM OMEG*R TTEMPF	THETA		LIFTH,C		PITCHH,S		CLRH/S		CLRH/S		CMYHS/S		THRUST		CTH/S	
				A1	B1	DRAGH,C	SIDEH,C	TORQ,C	HFORCE	CXRH/S	CYRH/S	CXRH/S	CYRH/S	CMXHS/S	FE	POW	HP	CPO/S	LDR
33	0.04	0.024	0.604	11.4	12186	361	0.09998	0.100006	0.000135	12190	0.100006	0.000135	0.000135	0.000135	0.000135	12190	0.100006	0.100006	0.100006
12	16	0.87	291.5	-2.1	-303	-80	0.00249	-0.001001	-0.00003	586219	0.00249	-0.001001	-0.00003	-0.00003	-0.00003	586219	0.007162	0.007162	0.007162
	-2	14.654	671.6	1.1	-330	19204	-0.002706	-0.002706	-348.8	1066	-0.002706	-0.002706	-0.002706	-348.8	-348.8	1066	0.001045	0.001045	0.001045
		0.002376	55.3	5.9	35.83	122				-39						-39	0.57	0.57	0.57
33	0.031	0.018	0.604	11.7	12203	95	0.100113	0.100156	0.000036	12209	0.100113	0.100156	0.000036	0.000036	0.000036	12209	0.100156	0.100156	0.100156
13	12.2	0.5	291.5	-1.8	-365	-214	0.002995	-0.000501	-0.00008	629080	0.002995	-0.000501	-0.00008	-0.00008	-0.00008	629080	0.007685	0.007685	0.007685
	-2	14.654	671.6	1.1	-287	20608	-0.002356	-0.002356	-730.12	1144	-0.002356	-0.002356	-0.002356	-730.12	-730.12	1144	0.001555	0.001555	0.001555
		0.002376	55.3	5.8	27.71	61				-36						-36	0.4	0.4	0.4
33	0.02	0.012	0.606	12.2	12371	160	0.100802	0.100851	0.000059	12377	0.100802	0.100851	0.000059	0.000059	0.000059	12377	0.100851	0.100851	0.100851
14	8.1	0.22	292.5	-1.3	-387	-262	0.003153	-0.000367	-0.000097	702085	0.003153	-0.000367	-0.000097	-0.000097	-0.000097	702085	0.008489	0.008489	0.008489
	-2	14.653	673.9	0.9	-242	22921	-0.001975	-0.001975	-1758.78	1277	-0.001975	-0.001975	-0.001975	-1758.78	-1758.78	1277	0.002295	0.002295	0.002295
		0.002376	55.3	5.8	18.55	45				-25						-25	0.24	0.24	0.24
33	0	0	0.607	12.2	12180	146	0.098837	0.098874	0.000054	12185	0.098837	0.098874	0.000054	0.000054	0.000054	12185	0.098874	0.098874	0.098874
15	0	0	293	0.2	-346	478	0.002809	-0.000642	0.000176	697786	0.002809	-0.000642	0.000176	0.000176	0.000176	697786	0.008388	0.008388	0.008388
	-2	14.653	675	-0.2	58	22742	0.000468	0.000468	0	1269	0.000468	0.000468	0.000468	0	0	1269	0.002376	0.002376	0.002376
		0.002378	55.1	5.8	0.04	79				0						0	0	0	0
35	0.251	0.152	0.606	8.8	12213	249	0.100094	0.100138	0.000093	12218	0.100094	0.100138	0.000093	0.000093	0.000093	12218	0.100138	0.100138	0.100138
20	99.6	33.71	291	-1.8	-367	-204	0.003009	-0.000486	-0.000076	331912	0.003009	-0.000486	-0.000076	-0.000076	-0.000076	331912	0.004057	0.004057	0.004057
	-2	14.751	670.4	6.2	-381	10892	-0.003125	-0.003125	-10.89	603	-0.003125	-0.003125	-0.003125	-10.89	-10.89	603	0.001809	0.001809	0.001809
		0.002387	52.1	6.2	84.61	59				31						31	7.6	7.6	7.6
35	0.224	0.136	0.606	8.7	12365	58	0.101038	0.101098	0.000022	12372	0.101038	0.101098	0.000022	0.000022	0.000022	12372	0.101098	0.101098	0.101098
21	89	27	291.1	-2	-428	-139	0.003495	-0.000033	-0.000051	344260	0.003495	-0.000033	-0.000051	-0.000051	-0.000051	344260	0.004195	0.004195	0.004195
	-2	14.751	670.6	5.9	-372	11293	-0.003038	-0.003038	-15.84	626	-0.003038	-0.003038	-0.003038	-15.84	-15.84	626	0.001707	0.001707	0.001707
		0.002392	51.9	6.2	83.73	4				-76						-76	6.64	6.64	6.64

RUN POINT	V/OR VKTS ALFS,U	MTUN QPSF BARO RHO	MTIP RPM OMEG* R	THETA A1 B1 CONING	LIFTH,C DRAGH,C SIDEH,C SKANGLE	PITCHH,S ROLLH,S TORQ,C HFORCE	CLRH/S CXRH/S CYRH/S	CLRHS/S CXRHS/S CYRHS/S	CMYHS/S CMXHS/S FE	THRUST POW HP VD	CTH/S CP/S CPO/S L/DR
35	0.198	0.12	0.606	8.5	12291	86	0.100044	0.1001	0.000032	12298	0.1001
22	78.9	21.27	291.4	-2.2	-412	-127	0.003353	-0.000141	-0.000047	342636	0.004154
	-2	14.751	671.3	5.2	-364	11228	-0.002961	-0.002961	-19.36	623	0.001603
		0.002397	51.8	6.2	82.63	17				-102	5.69
35	0.174	0.105	0.605	8.5	12338	133	0.100705	0.100757	0.000049	12344	0.100757
23	69.1	16.33	290.8	-2.3	-398	-155	0.003249	-0.000267	-0.000058	352495	0.004294
	-2	14.751	670	4.6	-378	11575	-0.003088	-0.003088	-24.38	641	0.00155
		0.0024	51.8	6.2	81.03	33				-115	4.7
35	0.151	0.092	0.607	8.6	12371	192	0.100292	0.100339	0.000071	12377	0.100339
24	60.2	12.39	291.6	-2.5	-382	-150	0.003096	-0.000406	-0.000055	370867	0.004475
	-2	14.751	671.8	4	-391	12145	-0.003172	-0.003172	-30.83	674	0.001518
		0.002403	51.7	6.2	78.89	50				-115	3.78
35	0.125	0.076	0.607	9	12452	245	0.100625	0.100666	0.00009	12457	0.100666
25	49.7	8.47	291.9	-2.9	-364	-171	0.002941	-0.000573	-0.000063	408199	0.004905
	-2	14.751	672.5	3.4	-427	13354	-0.003452	-0.003452	-42.98	742	0.001503
		0.002406	51.7	6.2	74.95	71				-106	2.77
35	0.113	0.069	0.606	9	12205	212	0.098733	0.098773	0.000078	12210	0.098773
26	45.2	6.99	291.7	-2.9	-354	-86	0.00286	-0.000587	-0.000031	413822	0.004981
	-2	14.75	672	3.1	-404	13547	-0.003267	-0.003267	-50.59	752	0.001442
		0.002407	51.7	6.1	72.8	73				-101	2.4
35	0.06	0.036	0.603	10.8	12310	305	0.100595	0.10062	0.000113	12313	0.10062
27	23.9	1.96	290	-3	-301	-150	0.002463	-0.001049	-0.000056	546111	0.00668
	-2	14.749	668.1	1.6	-451	17983	-0.003689	-0.003689	-153.76	993	0.000507
		0.00241	51.6	6	50.3	128				-55	0.93

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RUN POINT	V/OR VKTS ALFS,U	MTUN QPSF BARO RHO	MTIP RPM OMEG*R TTEMPF	THETA A1 B1 CONING	LIFTH,C DRAGH,C SIDEH,C SKANGLE	PITCHH,S ROLLH,S TORQ,C HFORCE	CLRH/S CXRH/S CYRH/S	CLRH/S CXRH/S CYRH/S	CLRH/S CXRH/S CYRH/S	CMYHS/S CMXHS/S FE	THRUST POW HP VD	CTH/S CP/S CPO/S LDR
35	0.05	0.03	0.605	11.2	12364	246	0.1003	0.100328	0.000091	12367	0.100328	
28	20	1.38	291	-2.7	-314	-186	0.002546	-0.000956	-0.000069	576530	0.006976	
	-2	14.75	670.4	1.5	-422	18919	-0.003424	-0.003424	-227.82	1048	0.000831	
		0.002411	51.5	6	43.53	118				-49	0.74	
35	0.042	0.025	0.604	11.5	12363	276	0.100686	0.100714	0.000102	12366	0.100714	
29	16.7	0.96	290.4	-2.3	-314	-215	0.002555	-0.00096	-0.00008	599352	0.007296	
	-2	14.75	669	1.2	-377	19709	-0.003069	-0.003069	-326.81	1090	0.001115	
		0.002412	51.5	6	37.21	118				-41	0.59	
35	0.031	0.019	0.607	11.8	12459	171	0.100207	0.100243	0.000062	12463	0.100243	
30	12.2	0.51	292.2	-1.7	-344	-277	0.00277	-0.000729	-0.000101	660588	0.007893	
	-2	14.75	673.2	1	-301	21588	-0.002421	-0.002421	-675.23	1201	0.001755	
		0.002412	51.5	5.9	27.7	91				-33	0.39	
39	0.249	0.151	0.606	5.9	12107	132	0.099303	0.099721	0.000049	12158	0.099721	
21	99.2	33.28	291.7	-1.3	1113	-110	-0.00913	-0.00044	-0.000041	58692	0.000716	
	5	14.76	672	5.1	-341	1921	-0.002798	-0.002798	33.44	107	0.001511	
		0.002373	54.9	6.4	91.55	54				1246	8.27	
39	0.223	0.135	0.607	6	12224	56	0.099675	0.10008	0.000021	12274	0.10008	
22	89	26.8	292.3	-1.6	1104	-80	-0.008999	-0.000277	-0.00003	85525	0.001036	
	5	14.76	673.4	4.8	-332	2794	-0.00271	-0.00271	41.18	155	0.001375	
		0.002378	54.9	6.4	90.67	34				1043	7.31	
39	0.198	0.12	0.605	6	12184	141	0.099661	0.100077	0.000052	12235	0.100077	
23	78.7	21.04	291.6	-1.9	1116	-120	-0.009128	-0.000407	-0.000045	107673	0.001311	
	5	14.76	671.8	4.1	-335	3526	-0.002737	-0.002737	53.04	196	0.00124	
		0.002382	54.9	6.3	89.49	50				890	6.33	



RUN POINT	V/OR VKTS ALFS,U	MTUN QPSF BARO RHO	MTIP RPM OMEG* R	THETA A1 B1 CONING	LIFTH,C DRAGH,C SIDEH,C SKANGLE	PITCHH,S ROLLH,S TORQ,C HFORCE	CLRH/S CXRH/S CYRH/S	CLRHS/S CXRHS/S CYRHS/S	CMYHS/S CMXHS/S FE	THRUST POW HP VD	CTH/S CP/S CPO/S L/DR
39	0.173	0.105	0.605	6.3	12277	112	0.100281	0.100694	0.000042	12328	0.100694
24	69	16.17	291.6	-2.1	1115	-21	-0.00911	-0.000335	-0.000008	144658	0.001759
	5	14.76	671.8	3.7	-318	4737	-0.002594	-0.002594	68.96	263	0.001169
		0.002385	54.9	6.3	87.78	41				741	5.21
39	0.151	0.091	0.606	6.5	12281	159	0.099789	0.100203	0.000059	12332	0.100203
25	60.1	12.28	292.2	-2.3	1120	4	-0.009101	-0.000369	0.000001	184558	0.002228
	5	14.761	673.2	3.3	-317	6031	-0.002577	-0.002577	91.19	336	0.001127
		0.002388	54.9	6.3	85.52	45				625	4.18
39	0.124	0.075	0.606	7.1	12284	193	0.099454	0.099859	0.000071	12334	0.099859
26	49.7	8.41	292.5	-2.9	1111	-66	-0.008992	-0.00029	-0.000024	247073	0.002969
	5	14.761	673.9	3.1	-363	8066	-0.002936	-0.002936	131.99	449	0.001116
		0.002391	54.7	6.2	81.33	36				494	3.03
39	0.101	0.061	0.605	8	12266	217	0.099539	0.09994	0.00008	12315	0.09994
27	40.2	5.5	292.1	-3.4	1102	-97	-0.008945	-0.000236	-0.000036	321183	0.003873
	5	14.761	673	2.8	-411	10500	-0.003331	-0.003331	200.3	584	0.001098
		0.002392	54.9	6.1	74.87	29				386	2.1
39	0.051	0.031	0.604	11.3	12788	265	0.104151	0.104631	0.000098	12847	0.104631
28	20.3	1.41	291.4	-3.5	1233	-112	-0.010045	-0.000929	-0.000041	569041	0.006903
	5	14.762	671.3	1.6	-510	18648	-0.004154	-0.004154	875.95	1035	0.000358
		0.002395	54.9	6.2	45.35	114				200	0.72
39	0.04	0.024	0.606	11.3	12414	197	0.100395	0.100854	0.000072	12471	0.100854
29	16	0.87	292.4	-2.6	1193	-58	-0.009645	-0.000858	-0.000022	577484	0.006933
	5	14.762	673.6	1.3	-395	18860	-0.003196	-0.003196	1370.78	1050	0.000739
		0.002396	54.9	5.9	36.82	106				156	0.55

RUN POINT	V/OR VKTS ALFS,U	MTUN QPSF BARO RHO	MTIP RPM OMEG*R TTEMPF	THETA		LIFTH,C		PITCHH,S		CLRHS		CLRHS/S		CMYHS/S		THRUST		CTHS	
				A1	B1	DRAGH,C	SIDEH,C	ROLLH,S	TORQ,C	CXRH/S	CYRH/S	CXRH/S	CYRH/S	CMXH/S	FE	POW	HP	CP/S	CPO/S
				CONING	SKANGLE		HFORCE									VD	LDR		
39	0.03	0.018	0.607	11.7	12387		161			0.099754		0.10021		0.000059		12443		0.10021	
30	11.9	0.48	293	-1.9	1191		-181			-0.009588		-0.000858		-0.000066		624680		0.007453	
	5	14.762	675	1.1	-320		20359			-0.002576		-0.002576		2480.47		1136		0.001318	
		0.002396	54.9	5.9	27.67		107									115		0.38	
39	0.02	0.012	0.606	12.1	12340		103			0.099715		0.100145		0.000038		12393		0.100145	
31	8	0.22	292.5	-1.4	1150		-194			-0.009292		-0.000565		-0.000071		690615		0.008282	
	5	14.761	673.9	0.9	-243		22547			-0.001968		-0.001968		5226.43		1256		0.002153	
		0.002396	54.9	5.8	18.85		70									76		0.24	
39	0.01	0.006	0.601	13	12635		313			0.103797		0.104272		0.000117		12693		0.104272	
32	3.8	0.05	290.1	0.2	1215		222			-0.009983		-0.000899		0.000083		771790		0.009486	
	5	14.761	668.3	0.5	-29		25405			-0.000236		-0.000236		24305.41		1403		0.002975	
		0.002396	54.9	5.8	8.88		109									37		0.1	
41	0.251	0.152	0.606	4.1	12088		219			0.098964		0.100608		0.000081		12289		0.100608	
19	99.8	33.71	291.9	-1.1	2214		-84			-0.018127		-0.000667		-0.000031		-108527		-0.001321	
	10	14.763	672.5	4.5	-359		-3550			-0.002942		-0.002942		65.69		-197		0.001759	
		0.002375	54.9	6.6	96.56		81									2140		7.7	
41	0.229	0.139	0.606	4.3	12125		153			0.098966		0.100617		0.000057		12327		0.100617	
20	91.3	28.22	292.1	-1.3	2225		-59			-0.018161		-0.0007		-0.000022		-78906		-0.000957	
	10	14.764	673	4.2	-348		-2580			-0.002837		-0.002837		78.84		-143		0.0016	
		0.002379	54.9	6.6	95.86		86									1912		7.08	
41	0.2	0.122	0.607	4.5	12101		85			0.098246		0.099893		0.000031		12304		0.099893	
21	80	21.75	292.6	-1.6	2227		32			-0.018079		-0.000745		0.000012		-34537		-0.000416	
	10	14.765	674.1	3.7	-309		-1127			-0.002507		-0.002507		102.4		-63		0.001406	
		0.002383	54.9	6.5	94.62		92									1632		6.14	

RUN POINT	V/OR VKTS ALFS,U	MTUN QPSF BARO RHO	MTIP RPM OMEG*R TTEMPF	THETA A1 B1 CONING	LIFTH,C DRAGH,C SIDEH,C SKANGLE	PITCHH,S ROLLH,S TORQ,C HFORCE	CLRH/S CXRH/S CYRH/S	CLRH/S CXRH/S CYRH/S	CMYHS/S CMXHS/S FE	THRUST POW HP VD	CTH/S CP/S CPO/S L/DR
41	0.178	0.108	0.605	4.8	12059	161	0.098383	0.100064	0.00006	12265	0.100064
22	70.9 10	17.07 14.765 0.002386	291.7 672 54.9	-1.9 3.2 6.5	2242 -302 93.13	1 117 114	-0.018289 -0.00246	-0.000927 -0.00246	0 131.35	3559 6 1427	0.000043 0.001264 5.31
41	0.151	0.091	0.604	5.2	12050	78	0.098312	0.09996	0.000029	12252	0.09996
23	60.1 10	12.28 14.765 0.002389	291.5 671.6 54.9	-2.2 2.7 6.4	2217 -288 90.41	1 1993 91	-0.018088 -0.002351	-0.000742 -0.002351	0 180.5	60835 111 1171	0.000739 0.001076 4.28
41	0.125	0.076	0.604	5.8	12051	152	0.098369	0.100047	0.000056	12257	0.100047
24	49.7 10	8.42 14.766 0.002393	291.2 670.9 54.7	-2.6 2.3 6.3	2238 -300 86.01	-57 4109 112	-0.018272 -0.002445	-0.000913 -0.002445	-0.000021 265.7	125290 228 960	0.001524 0.000916 3.23
41	0.101	0.061	0.604	6.8	12110	212	0.098775	0.100426	0.000078	12312	0.100426
25	40.1 10	5.48 14.765 0.002395	291.2 670.9 54.7	-3.4 2.3 6.3	2225 -356 78.85	-48 7282 88	-0.018149 -0.002903	-0.000721 -0.002903	-0.000018 405.83	222071 404 755	0.0027 0.000913 2.2
41	0.091	0.055	0.605	7.4	12211	243	0.09916	0.100792	0.00009	12412	0.100792
26	36.2 10	4.47 14.765 0.002396	291.8 672.3 54.7	-3.5 2.3 6.2	2226 -388 74.5	-27 8991 72	-0.018075 -0.003153	-0.000581 -0.003153	-0.00001 498.1	274727 500 672	0.003319 0.000913 1.82
41	0.04	0.025	0.605	11.2	12223	133	0.09895	0.100627	0.000049	12430	0.100627
27	16.1 10	0.89 14.765 0.002398	292.1 673 54.7	-3.2 1.4 6	2262 -470 37.98	-118 18086 105	-0.018312 -0.003806	-0.000852 -0.003806	-0.000043 2541.62	553214 1006 299	0.006655 0.000482 0.54

RUN POINT	V/OR VKTS ALFS,U	MTUN QPSF BARO RHO	MTIP RPM OMEG*R TTEMPF	THETA A1 B1 CONING	LIFTH,C DRAGH,C SIDEH,C SKANGLE	PITCHH,S ROLLH,S TORQ,C HFORCE	CLRH/S CXRH/S CYRH/S	CLRH/S CXRH/S CYRH/S	CMYHS/S CMXHS/S FE	THRUST POW HP VD	CTH/S CP/S CPO/S LDR
41	0.029	0.018	0.606	11.6	12189	99	0.098574	0.100285	0.000036	12400	0.100285
28	11.6	0.46	292.2	-2.1	2284	-141	-0.018474	-0.001076	-0.000052	611072	0.007341
	10	14.765	673.2	1.1	-329	19970	-0.002659	-0.002659	4965.93	1111	0.001199
		0.002399	54.6	5.9	27.42	133				217	0.36
41	0.018	0.011	0.604	12.3	12296	33	0.099765	0.101429	0.000012	12501	0.101429
29	7.1	0.17	291.7	-1.3	2257	-216	-0.018309	-0.000707	-0.000079	703803	0.008497
	10	14.766	672	0.9	-231	23040	-0.001874	-0.001874	13273.93	1280	0.00225
		0.002399	54.6	5.8	16.53	87				129	0.2
41	0	0	0.603	12.5	12096	-447	0.098491	0.100003	-0.000165	12281	0.100003
30	0	0	291.2	-0.3	2128	-143	-0.017324	0.000042	-0.000053	722457	0.008769
	10	14.766	670.9	0.9	-69	23691	-0.000559	-0.000559	0	1314	0.002653
		0.002399	54.7	5.7	0.04	-5				0	0

## **APPENDIX C**

### **FORWARD FLIGHT DYNAMIC LOADS DATA SUMMARY**

## Forward Flight Dynamic Loads Data Summary

Summary of dynamic loads data are divided into two sections; thrust sweep data and speed sweep data. Data for both forward flight thrust sweep conditions and speed sweep conditions with minimized flapping trim are presented in tabulated form in this appendix. Thrust sweep data runs are grouped in terms of increasing rotor advance ratio and shaft angle-of-attack,  $\alpha_s$ . Speed sweep data runs are grouped in terms of increasing shaft angle-of-attack,  $\alpha_s$ , and thrust condition. For each of the measurements, the time-averaged mean and one-half peak-to-peak value (absolute maximum minus the absolute minimum divided by 2) are presented. Definitions of the measurements that are presented in this section are shown below. Identification of test conditions and its location within this appendix are presented following these definitions.

### Nomenclature

ALFS,U, $\alpha_s$	rotor shaft angle, positive aft of vertical, deg
b	number of rotor blades
c	airfoil chord length, ft
CTH/S	rotor thrust coefficient divided by rotor solidity, $\text{THRUST}/\rho (\Omega R)^2 S_R$
OMEG*R	rotor tip speed, $\Omega R$ , ft/sec
POINT	data point number
QPSF	free-stream dynamic pressure, $\text{lb/ft}^2$
R	rotor radius, ft
RHO, $\rho$	free-stream air density, $\rho$ , slug/ft <sup>3</sup>
RUN	data run number
$S_R$	rotor blade area, $\text{bcR}$ , ft <sup>2</sup>
THRUST	rotor thrust, perpendicular to tip-path-plane, positive up, lb
V/OR, $\mu$	rotor advance ratio, $V/\Omega R$
V	free-stream velocity, ft/s
VKTS	free-stream velocity, kt
$\Omega$	rotor rotational speed, rad/s

## Measurement Descriptions

<u>Parameter Name</u>	<u>Measurement Type</u>	<u>Location, r/R</u>	<u>Units</u>	<u>Positive Sign Convention</u>
MRNB1A	Flap Bending	0.127	ft-lb	tip up
MRNB2	Flap Bending	0.200	ft-lb	tip up
MRNB3	Flap Bending	0.300	ft-lb	tip up
MRNB7	Flap Bending	0.679	ft-lb	tip up
MRNB9A	Flap Bending	0.920	ft-lb	tip up
MREB1A	Chord Bending	0.127	ft-lb	leading edge tension
MREB2	Chord Bending	0.200	ft-lb	leading edge tension
MREB3	Chord Bending	0.300	ft-lb	leading edge tension
MREB4A	Chord Bending	0.454	ft-lb	leading edge tension
MRPR3	Pitch Link	0.05168	lb	tension
MRFLAP1	Blade Flap	$\approx 0.060$	deg	tip up

# Thrust Sweep Dynamic Data Summary Index

V/OR Advance Ratio	ALFS,U deg	RUN	PTS	CTH/S	DATA LOCATION
0.050	-2	44	14-23	.030-->.120	C-8 to C-9
0.081	0	48	32-36	.038-->.075	C-9 to C-10
-----	-----	-----	-----	-----	-----
0.100	-15	63	9-18	.030-->.120	C-10 to C-11
0.100	-10	45	5-14	.030-->.120	C-11 to C-12
0.100	-2	44	6-13	.038-->.100	C-12 to C-14
0.100	5	46	5-10	.050-->.100	C-14 to C-14
0.100	10	47 49	5-8 5-12	.070-->.101 .070-->.120	C-15 to C-15 C-15 to C-16
-----	-----	-----	-----	-----	-----
0.125	5	26 29	12-18 5-12	.054-->.111 .060-->.100	C-16 to C-17 C-17 to C-18
0.125	10	30	5-11	.064-->.121	C-18 to C-19
-----	-----	-----	-----	-----	-----
0.150	-15	63	19-27	.031-->.111	C-19 to C-21
0.150	-10	21 22	23-31 12-22	.031-->.098 .023-->.119	C-21 to C-22 C-22 to C-23
0.150	-2	24	7-13	.041-->.120	C-24 to C-24
0.150	5	28	7-14	.059-->.119	C-25 to C-26
0.150	10	30	12-17	.070-->.119	C-26 to C-27



**Thrust Sweep Dynamic Data Summary Index**  
(Continued)

V/OR Advance Ratio	ALFS,U deg	RUN	PTS	CTH/S	DATA LOCATION
.200	-10	22	23-27	.014-->.060	C-27 to C-27
		23	5-14	.015-->.120	C-27 to C-29
.200	-2	25	5-13	.041-->.118	C-29 to C-30
.200	5	28	15-21	.063-->.120	C-30 to C-31
.200	10	30	18-23	.078-->.121	C-31 to C-32
-----	-----	-----	-----	-----	-----
.250	-15	63	28-35	.031-->.090	C-32 to C-33
.250	-10	23	15-24	.030-->.116	C-33 to C-34
.250	-2	25	14-21	.038-->.105	C-34 to C-35
.250	5	29	13-19	.070-->.120	C-36 to C-36
.250	10	31	11-16	.083-->.120	C-37 to C-37

### Speed Sweep Dynamic Data Summary Index

ALFS,U deg	CTH/S	RUN	PTS	V/OR Advance Ratio	DATA LOCATION
-10	0.065	36	6-11, 22-33	.251-->.006	C-38 to C-40
-5	0.065	51	5-18	.250-->.011	C-40 to C-42
-2	0.065	32	7-19	.250-->.000	C-42 to C-44
	0.065	34	5-18	.250-->.032	C-44 to C-46
5	0.065	38	5-21	.250-->.010	C-46 to C-49
-----	-----	-----	-----	-----	-----
-10	0.080	37	5-18	.251-->.011	C-48 to C-50
-5	0.080	53	5-10,12-21	.250-->.014	C-50 to C-53
-2	0.080	32	20-32	.250-->.000	C-51 to C-54
	0.080	35	5-19	.251-->.031	C-55 to C-57
0	0.080	48	5-31	.013->.250->0	C-57 to C-60
5	0.080	39	6-20	.250-->.011	C-61 to C-63
10	.0080	41	5-18	.252-->.010	C-63 to C-65
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10	0.084	31	17-22	.252-->.080	C-65
-----	-----	-----	-----	-----	-----
-10	0.100	37	19-31	.251-->.011	C-66 to C-67
-2	0.100	33	5-15	.251-->.000	C-67 to C-69
		35	20-30	.251-->.030	C-69 to C-70
5	0.100	39	21-32	.249-->.010	C-71 to C-72
10	0.100	41	19-30	.251-->.000	C-72 to C-74

RUN POINT	V/OR VKTS	ALFS,U CTH/S	MRFLAP1 MRPR3	MRNB1A			MREB1A			MREB4A			MRNB1A			MREB1A			MREB4A		
				MRNB2	MRNB3	(MEAN)	MREB2	MREB3	(MEAN)	MRNB2	MRNB3	(MEAN)	MRNB2	MRNB3	(1/2P-P)	MREB2	MREB3	(1/2P-P)	MRNB2	MRNB3	(1/2P-P)
44	0.051	-2	2.2	87			-31			1207			0.5			241			127		
14	20.5	0.029989	-21	-40			708			-28			158			209			111		
				10			314			5						220			88		
44	0.051	-2	2.8	106			-41			1189			0.6			435			137		
15	20.5	0.040676	-62	-27			688			-15			192			395			123		
				19			294			17						420			101		
44	0.051	-2	3.3	130			12			1193			0.6			565			134		
16	20.4	0.050599	-89	-11			716			2			208			546			117		
				29			302			29						566			100		
44	0.051	-2	3.8	150			20			1172			0.6			616			143		
17	20.4	0.060349	-119	3			707			20			219			624			118		
				38			284			40						664			97		
44	0.051	-2	4.4	174			33			1149			0.6			658			140		
18	20.4	0.071419	-150	20			703			38			292			650			112		
				49			264			51						733			97		
44	0.051	-2	4.8	195			44			1126			0.6			659			144		
19	20.5	0.079811	-172	33			698			51			279			632			112		
				59			244			59						730			92		
44	0.051	-2	5.4	223			63			1096			0.6			649			161		
20	20.4	0.091121	-200	53			693			66			314			613			123		
				72			222			70						688			99		

RUN POINT	V/OR VKTS	ALFS,U CTH/S	MRFLAP1 MRPR3 (MEAN)	MRNB1A MRNB2 MRNB3 (MEAN)	MREB1A MREB2 MREB3 (MEAN)	MREB4A MRNB7 MRNB9A (MEAN)	MRFLAP1 MRPR3 (1/2P-P)	MRNB1A MRNB2 MRNB3 (1/2P-P)	MREB1A MREB2 MREB3 (1/2P-P)	MREB4A MRNB7 MRNB9A (1/2P-P)
44	0.051	-2	5.9	250	91	1075	0.6	172	636	657
21	20.4	0.100996	-220	70	699	79	335	121	603	200
				84	208	78		103	687	106
44	0.051	-2	6.3	276	122	1057	0.6	178	677	725
22	20.4	0.110613	-240	89	706	90	368	123	676	204
				97	202	87		96	749	106
44	0.051	-2	6.8	306	179	1069	0.6	185	753	869
23	20.4	0.119939	-266	109	739	96	396	127	788	200
				109	222	95		101	901	105
48	0.081	0	2.7	99	-51	1208	0.5	107	199	237
32	32.4	0.037936	-45	-37	679	-47	143	92	182	108
				-23	310	-4		77	215	52
48	0.081	0	3.4	125	-7	1230	0.6	188	495	363
33	32.4	0.050123	-75	-21	707	-43	197	155	501	152
				-13	318	1		110	474	73
48	0.081	0	3.9	145	16	1222	0.6	223	610	516
34	32.5	0.059503	-96	-7	709	-38	217	180	640	183
				-6	320	6		132	661	94
48	0.081	0	4.4	169	27	1218	0.7	262	734	735
35	32.5	0.069915	-123	8	707	-32	272	214	777	207
				4	311	14		157	825	111

RUN POINT	V/OR VKTS	ALFS,U CTH/S	MRFLAP1 MRPR3 (MEAN)	MRNB1A MRNB2 MRNB3 (MEAN)	MREB1A MREB2 MREB3 (MEAN)	MREB4A MRNB7 MRNB9A (MEAN)	MRFLAP1 MRPR3 (1/2P-P)	MRNB1A MRNB2 MRNB3 (1/2P-P)	MREB1A MREB2 MREB3 (1/2P-P)	MREB4A MRNB7 MRNB9A (1/2P-P)
48	0.081	0	4.7	180	30	1205	0.7	280	765	822
36	32.5	0.074841	-135	17	702	-29	301	214	813	220
				10	299	18		166	867	117
63	0.1	-14.99	-0.2	105	29	1244	0.4	28	165	143
9	40.3	0.02978	-89	-17	749	-26	96	25	142	56
				84	328	-5		28	160	23
63	0.101	-14.99	0.4	128	49	1246	0.4	40	327	206
10	40.3	0.040431	-108	-3	754	-21	126	31	265	70
				95	331	-1		34	268	34
63	0.101	-14.99	0.9	142	25	1244	0.5	52	429	297
11	40.4	0.050346	-136	8	735	-16	158	37	349	87
				119	312	3		39	370	44
63	0.101	-15	1.4	163	48	1251	0.5	70	567	449
12	40.4	0.060376	-155	21	745	-9	210	44	523	99
				127	314	10		44	541	52
63	0.101	-15	1.9	186	70	1241	0.5	84	570	453
13	40.4	0.070326	-172	37	746	-3	246	44	501	108
				137	310	15		42	539	60
63	0.101	-15	2.4	209	91	1238	0.6	95	578	460
14	40.3	0.080332	-191	52	752	6	257	46	497	118
				148	303	22		48	550	67

RUN POINT	V/OR VKTS	ALFS,U CTH/S	MRFLAP1 MRPR3 (MEAN)	MRNB1A MRNB2 MRNB3 (MEAN)	MREB1A MREB2 MREB3 (MEAN)	MREB4A MRNB7 MRNB9A (MEAN)	MRFLAP1 MRPR3 (1/2P-P)	MRNB1A MRNB2 MRNB3 (1/2P-P)	MREB1A MREB2 MREB3 (1/2P-P)	MREB4A MRNB7 MRNB9A (1/2P-P)
63 15	0.1 40.3	-15 0.090203	2.9 -206	235 68 159	122 763 300	1237 13 28	0.5 285	102 49 52	590 533 576	460 130 72
63 16	0.101 40.4	-15 0.09993	3.4 -223	260 85 171	150 767 294	1223 22 35	0.6 321	113 52 58	591 535 597	490 140 75
63 17	0.101 40.4	-15 0.109795	3.9 -239	283 102 181	168 765 285	1204 30 42	0.7 333	130 57 64	624 573 643	529 150 82
63 18	0.1 40.3	-15 0.119581	4.4 -286	314 122 414	212 803 320	1257 31 37	0.7 486	186 78 79	660 611 707	601 157 99
45 5	0.099 39.8	-10 0.030156	2.2 -19	103 -31 6	22 743 340	1255 -37 -1	0.3 155	43 38 36	181 155 163	144 62 29
45 6	0.099 39.8	-10 0.039968	2.7 -42	121 -18 13	18 731 331	1245 -33 5	0.3 146	56 47 43	307 250 260	217 81 41
45 7	0.1 39.9	-10 0.050515	3.3 -72	137 -6 21	1 712 313	1234 -27 13	0.4 191	73 60 51	476 402 423	328 102 55

RUN POINT	V/OR VKTS	ALFS,U CTH/S	MRFLAP1 MRPR3 (MEAN)	MRNB1A MRNB2 MRNB3 (MEAN)	MREB1A MREB2 MREB3 (MEAN)	MREB4A MRNB7 MRNB9A (MEAN)	MRFLAP1 MRPR3 (1/2P-P)	MRNB1A MRNB2 MRNB3 (1/2P-P)	MREB1A MREB2 MREB3 (1/2P-P)	MREB4A MRNB7 MRNB9A (1/2P-P)
45 8	0.1 40	-10 0.060762	3.8 -90	159 8 30	28 718 311	1226 -20 20	0.4 235	79 69 63	558 502 536	450 118 66
45 9	0.1 40	-10 0.070472	4.3 -110	180 23 38	46 720 307	1219 -14 26	0.5 257	85 75 67	573 512 542	435 132 77
45 10	0.1 40	-10 0.081048	4.9 -126	205 39 50	77 731 305	1211 -6 35	0.6 281	106 76 73	586 504 566	471 149 87
45 11	0.1 40	-10 0.090024	5.4 -142	228 55 59	100 734 299	1197 2 42	0.6 307	115 80 81	602 537 584	497 157 95
45 12	0.1 40	-10 0.100513	5.9 -158	258 73 72	141 751 300	1195 9 52	0.8 340	129 87 87	614 566 636	548 167 100
45 13	0.1 40	-10 0.110049	6.4 -188	282 90 83	163 759 301	1196 15 60	0.8 453	166 94 86	653 626 678	581 176 113
45 14	0.1 40.1	-10 0.120002	6.8 -248	304 107 94	183 787 333	1242 13 68	0.9 533	220 105 98	700 736 844	727 175 130

RUN POINT	V/OR VKTS	ALFS,U CTH/S	MRFLAP1 MRPR3 (MEAN)	MRNB1A MRNB2 MRNB3 (MEAN)	MREB1A MREB2 MREB3 (MEAN)	MREB4A MRNB7 MRNB9A (MEAN)	MRFLAP1 MRPR3 (1/2P-P)	MRNB1A MRNB2 MRNB3 (1/2P-P)	MREB1A MREB2 MREB3 (1/2P-P)	MREB4A MRNB7 MRNB9A (1/2P-P)
44 6	0.102 40.6	-2 0.037875	2.6 -4	111 -32 9	29 747 364	1262 -50 -4	0.4 143	74 62 61	196 200 220	208 88 44
44 7	0.101 40.7	-2 0.040999	2.8 -14	117 -28 9	3 728 348	1253 -49 -2	0.4 148	90 74 68	205 208 228	234 96 50
44 8	0.101 40.6	-2 0.04991	3.3 -43	129 -19 15	-30 701 326	1241 -46 1	0.4 190	135 111 83	434 404 372	277 120 63
44 9	0.101 40.6	-2 0.060499	3.8 -62	151 -5 24	8 717 333	1244 -44 5	0.5 261	169 137 101	567 552 593	509 150 77
44 10	0.101 40.7	-2 0.070523	4.4 -82	173 9 33	18 716 327	1243 -40 11	0.6 264	205 161 118	683 721 717	651 174 97
44 11	0.101 40.6	-2 0.080408	4.9 -101	196 25 44	36 717 319	1238 -35 17	0.7 293	247 182 139	733 798 821	793 204 113
44 12	0.101 40.7	-2 0.090072	5.4 -120	218 40 55	55 719 312	1230 -29 23	0.8 327	273 209 148	756 814 859	844 226 121



RUN POINT	V/OR VKTS	ALFS,U CTH/S	MRFLAP1 MRPR3 (MEAN)	MRNB1A MRNB2 MRNB3 (MEAN)	MREB1A MREB2 MREB3 (MEAN)	MREB4A MRNB7 MRNB9A (MEAN)	MRFLAP1 MRPR3 (1/2P-P)	MRNB1A MRNB2 MRNB3 (1/2P-P)	MREB1A MREB2 MREB3 (1/2P-P)	MREB4A MRNB7 MRNB9A (1/2P-P)
44 13	0.101 40.7	-2 0.10001	5.9 -137	241 56 65	75 723 304	1225 -22 30	0.9 358	291 225 153	773 819 942	942 248 126
46 5	0.1 40	5 0.069881	4.5 -94	143 -13 6	-9 707 373	1286 -61 -1	0.5 226	197 125 100	516 451 453	314 129 93
46 6	0.1 40	5 0.099769	6.1 -149	203 27 35	57 738 373	1289 -52 9	0.6 326	414 274 180	711 821 946	794 223 128
46 7	0.1 40.1	5 0.049816	3.4 -49	105 -36 -5	-45 691 374	1279 -66 -10	0.5 188	90 62 62	266 276 270	229 87 48
46 8	0.101 40.2	5 0.060181	4 -74	122 -26 0	-39 690 373	1274 -64 -7	0.4 213	164 92 83	480 411 393	338 111 73
46 9	0.1 40.1	5 0.069827	4.5 -92	141 -14 7	-15 702 374	1276 -62 -4	0.5 236	193 121 101	512 433 450	325 131 92
46 10	0.101 40.1	5 0.079865	5 -111	160 -2 16	8 711 378	1273 -59 0	0.5 283	241 146 115	586 554 581	460 174 116

RUN POINT	V/OR VKTS	ALFS,U CTH/S	MRFLAP1 MRPR3 (MEAN)	MRNB1A MRNB2 MRNB3 (MEAN)	MREB1A MREB2 MREB3 (MEAN)	MREB4A MRNB7 MRNB9A (MEAN)	MRFLAP1 MRPR3 (1/2P-P)	MRNB1A MRNB2 MRNB3 (1/2P-P)	MREB1A MREB2 MREB3 (1/2P-P)	MREB4A MRNB7 MRNB9A (1/2P-P)
47	0.101	10	4.6	148	-22	1351	0.7	139	518	349
5	40	0.070013	-32	-30	723	-80	206	106	454	94
				-12	428	-3		95	432	47
47	0.1	10	5.2	166	-6	1370	0.6	253	557	393
6	39.9	0.080596	-52	-20	739	-78	258	160	521	128
				-8	446	0		102	501	70
47	0.1	10	5.7	181	1	1380	0.7	274	623	567
7	39.9	0.090138	-71	-11	748	-76	261	185	592	140
				-2	451	3		108	593	77
47	0.1	10	6.3	203	50	1392	0.6	262	639	718
8	40	0.101203	-92	3	781	-74	275	182	639	129
				4	478	8		117	774	78
49	0.1	10	4.6	140	-33	1331	0.7	140	530	357
5	39.9	0.070314	-26	-25	701	-82	225	106	463	98
				-12	402	-5		90	439	54
49	0.1	10	6.2	192	27	1366	0.6	240	614	693
6	39.9	0.099873	-82	5	747	-76	264	176	592	126
				1	442	55		130	730	76
49	0.1	10	4.6	135	-37	1328	0.7	140	515	345
7	39.9	0.069544	-22	-27	701	-82	222	104	459	95
				-14	413	45		92	430	57

RUN POINT	V/OR VKTS	ALFS,U CTH/S	MRFLAP1 MRPR3 (MEAN)	MRNB1A MRNB2 MRNB3 (MEAN)	MREB1A MREB2 MREB3 (MEAN)	MREB4A MRNB7 MRNB9A (MEAN)	MRFLAP1 MRPR3 (1/2P-P)	MRNB1A MRNB2 MRNB3 (1/2P-P)	MREB1A MREB2 MREB3 (1/2P-P)	MREB4A MRNB7 MRNB9A (1/2P-P)
49 8	0.1 39.8	10 0.079887	5.1 -43	153 -16 -10	-24 710 428	1341 -81 48	0.6 261	236 147 103	554 517 485	395 124 64
49 9	0.1 39.8	10 0.088993	5.7 -62	170 -7 -5	-10 719 434	1348 -78 56	0.6 288	273 188 117	620 610 581	536 139 77
49 10	0.1 39.8	10 0.09953	6.2 -81	191 5 2	25 746 441	1366 -77 55	0.6 277	257 180 123	616 597 735	697 131 79
49 11	0.1 39.8	10 0.109717	6.8 -96	212 18 8	58 765 452	1375 -73 15	0.6 327	333 208 137	737 837 928	793 162 134
49 12	0.1 39.7	10 0.119753	7.3 -120	233 34 23	71 766 445	1372 -71 -152	0.8 436	445 263 173	924 1217 1176	871 229 191
26 12	0.124 49.5	5 0.054297	3.6 -22	125 -30 30	-40 702 409	1440 -76 -7	0.6 171	71 56 59	240 225 289	261 81 34
26 13	0.124 49.5	5 0.060327	4 -38	135 -24 497	-31 707 412	1442 -75 -5	0.6 198	69 60 133	434 375 375	301 96 38

RUN POINT	V/OR VKTS	ALFS,U CTH/S	MRFLAP1 MRPR3 (MEAN)	MRNB1A MRNB2 MRNB3 (MEAN)	MREB1A MREB2 MREB3 (MEAN)	MREB4A MRNB7 MRNB9A (MEAN)	MRFLAP1 MRPR3 (1/2P-P)	MRNB1A MRNB2 MRNB3 (1/2P-P)	MREB1A MREB2 MREB3 (1/2P-P)	MREB4A MRNB7 MRNB9A (1/2P-P)
26 14	0.124 49.5	5 0.069705	4.5 -64	150 -14 929	-24 709 416	1450 -74 -3	0.6 207	121 78 380	511 424 410	347 123 57
26 15	0.124 49.5	5 0.080041	5 -71	169 -2 718	-16 711 420	1456 -73 0	0.6 227	166 90 371	599 545 566	479 142 93
26 16	0.124 49.5	5 0.090229	5.6 -76	190 10 335	4 717 424	1460 -70 2	0.6 242	226 120 396	667 650 696	650 162 117
26 17	0.124 49.5	5 0.100309	6.2 -87	209 22 341	22 726 429	1469 -69 -3	0.6 282	279 129 356	674 680 747	699 186 144
26 18	0.124 49.5	5 0.110601	6.7 -116	228 35 430	47 739 424	1473 -66 -17	0.6 329	299 141 674	719 705 837	765 202 153
29 5	0.125 50.1	5 0.060347	4 -35	136 -22 2528	-36 707 406	1437 -76 -16	0.5 169	73 61 306	401 368 365	295 98 39
29 6	0.125 50.1	5 0.069715	4.5 -54	150 -13 2416	-40 699 403	1438 -75 -46	0.5 213	122 84 999	508 432 424	348 124 56

RUN POINT	V/OR VKTS	ALFS,U CTHS	MRFLAP1 MRPR3 (MEAN)	MRNB1A MRNB2 MRNB3 (MEAN)	MREB1A MREB2 MREB3 (MEAN)	MREB4A MRNB7 MRNB9A (MEAN)	MRFLAP1 MRPR3 (1/2P-P)	MRNB1A MRNB2 MRNB3 (1/2P-P)	MREB1A MREB2 MREB3 (1/2P-P)	MREB4A MRNB7 MRNB9A (1/2P-P)
29 7	0.125 50.1	5 0.080014	5.1 -71	169 -2 2123	-28 709 410	1456 -74 -51	0.5 230	158 91 989	583 539 559	461 143 90
29 8	0.125 50.1	5 0.089774	5.6 -86	187 10 1471	-8 715 419	1459 -72 -59	0.5 231	223 113 1159	652 625 681	630 156 114
29 9	0.125 50.1	5 0.099992	6.2 -104	207 23 2502	15 727 429	1469 -70 -41	0.4 272	284 140 600	670 672 734	711 193 154
29 10	0.125 50	5 0.090746	5.7 -86	186 10 2280	-8 715 421	1456 -72 -46	0.4 248	234 118 1057	655 629 693	633 159 123
29 11	0.125 50	5 0.091056	5.7 -86	186 11 1654	-6 714 420	1453 -72 -47	0.5 248	232 119 1146	659 647 705	635 163 122
29 12	0.125 50	5 0.090904	5.7 -87	187 11 698	-6 713 419	1447 -71 -39	0.5 252	234 120 1286	650 632 696	645 163 122
30 5	0.125 49.9	10.01 0.064353	4.3 -18	133 -26 1295	-70 676 390	1392 -85 -13	0.6 171	79 74 987	394 376 388	327 75 32

RUN POINT	V/OR VKTS	ALFS,U CTH/S	MRFLAP1 MRPR3 (MEAN)	MRNB1A MRNB2 MRNB3 (MEAN)	MREB1A MREB2 MREB3 (MEAN)	MREB4A MRNB7 MRNB9A (MEAN)	MRFLAP1 MRPR3 (1/2P-P)	MRNB1A MRNB2 MRNB3 (1/2P-P)	MREB1A MREB2 MREB3 (1/2P-P)	MREB4A MRNB7 MRNB9A (1/2P-P)
30 6	0.125 49.9	10.01 0.070391	4.6 -29	142 -21 2438	-76 673 388	1400 -87 -39	0.6 198	116 93 482	490 439 460	373 82 46
30 7	0.125 49.9	10.01 0.080061	5.2 -43	158 -11 2521	-73 670 390	1406 -89 -31	0.7 227	156 120 702	530 479 485	383 97 50
30 8	0.124 49.9	10.01 0.090345	5.7 -59	176 -1 2148	-64 677 399	1428 -94 -41	0.6 221	159 129 822	543 496 477	400 122 68
30 9	0.125 49.9	10.01 0.099661	6.2 -72	192 9 2549	-46 684 412	1440 -96 -38	0.7 239	145 122 488	550 506 526	476 125 63
30 10	0.124 49.9	10.01 0.10977	6.8 -87	212 21 2491	-16 707 416	1468 -96 -46	0.7 266	182 138 892	588 566 600	592 144 65
30 11	0.125 49.9	10.01 0.121272	7.4 -102	234 34 2380	9 719 439	1484 -91 -35	0.6 283	180 116 907	676 664 676	677 139 64
63 19	0.151 60.3	-15 0.030681	-0.1 -90	107 -11 334	60 770 330	1251 -27 -35	0.5 166	31 22 32	197 183 194	196 59 23

RUN POINT	V/OR VKTS	ALFS,U CTH/S	MRFLAP1 MRPR3 (MEAN)	MRNB1A MRNB2 MRNB3 (MEAN)	MREB1A MREB2 MREB3 (MEAN)	MREB4A MRNB7 MRNB9A (MEAN)	MRFLAP1 MRPR3 (1/2P-P)	MRNB1A MRNB2 MRNB3 (1/2P-P)	MREB1A MREB2 MREB3 (1/2P-P)	MREB4A MRNB7 MRNB9A (1/2P-P)
63 20	0.15 60.1	-15 0.040739	0.4 -126	118 -1 342	-15 712 284	1226 -24 -32	0.4 149	41 23 36	337 302 343	288 73 29
63 21	0.151 60.2	-15 0.050253	0.9 -140	140 13 351	27 732 297	1234 -24 -28	0.4 192	65 21 40	512 465 503	418 83 36
63 22	0.151 60.3	-15 0.060507	1.4 -155	162 27 360	51 743 302	1244 -22 -25	0.4 218	75 27 46	546 488 532	442 93 41
63 23	0.151 60.4	-15 0.070393	1.9 -170	188 42 369	80 754 308	1253 -19 -21	0.5 248	86 34 52	556 497 532	432 104 47
63 24	0.15 60.2	-15 0.080009	2.4 -185	212 57 381	114 770 311	1261 -15 -17	0.6 278	100 39 57	577 513 585	474 116 52
63 25	0.151 60.4	-15 0.090769	2.9 -199	238 75 392	140 773 307	1253 -11 -11	0.6 298	107 46 64	605 567 646	531 128 58
63 26	0.151 60.5	-15 0.100854	3.4 -215	262 91 402	159 777 304	1251 -7 -6	0.6 321	117 51 67	632 602 705	582 138 63

RUN POINT	V/OR VKTS	ALFS,U CTH/S	MRFLAP1 MRPR3 (MEAN)	MRNB1A MRNB2 MRNB3 (MEAN)	MREB1A MREB2 MREB3 (MEAN)	MREB4A MRNB7 MRNB9A (MEAN)	MRFLAP1 MRPR3 (1/2P-P)	MRNB1A MRNB2 MRNB3 (1/2P-P)	MREB1A MREB2 MREB3 (1/2P-P)	MREB4A MRNB7 MRNB9A (1/2P-P)
63	0.152	-15	3.9	287	181	1247	0.7	130	653	628
27	60.6	0.110735	-228	107	781	-2	356	61	642	151
				412	301	1		72	754	68
21	0.151	-10.01	2.3	82	1	1410	0.3	33	170	158
23	60.1	0.030861	-70	-30	730	-43	106	30	138	67
				26	394	2		37	171	27
21	0.151	-10.01	2.7	98	-41	1395	0.3	39	299	273
24	60	0.040117	-97	-19	695	-41	169	31	254	81
				33	366	4		43	297	35
21	0.151	-10.01	3.3	120	-34	1408	0.4	64	509	408
25	60	0.050374	-119	-5	707	-39	246	38	447	99
				41	371	9		49	488	44
21	0.151	-10.01	3.8	140	-18	1416	0.5	71	568	462
26	60.1	0.059195	-133	8	716	-37	226	54	514	115
				49	374	12		57	552	52
21	0.151	-10.01	4.4	167	10	1418	0.5	86	579	440
27	60.1	0.071094	-150	26	724	-34	265	69	499	133
				60	375	16		68	538	60
21	0.152	-10.01	4.9	190	46	1408	0.6	99	625	538
28	60.1	0.080148	-161	41	735	-30	299	74	566	140
				69	379	21		74	620	69



RUN POINT	V/OR VKTS	ALFS,U CTH/S	MRFLAP1 MRPR3 (MEAN)	MRNB1A MRNB2 MRNB3 (MEAN)	MREB1A MREB2 MREB3 (MEAN)	MREB4A MRNB7 MRNB9A (MEAN)	MRFLAP1 MRPR3 (1/2P-P)	MRNB1A MRNB2 MRNB3 (1/2P-P)	MREB1A MREB2 MREB3 (1/2P-P)	MREB4A MRNB7 MRNB9A (1/2P-P)
21	0.152	-10.01	5.4	210	60	1411	0.6	109	625	565
29	60.1	0.089108	-174	55	735	-27	322	86	577	153
				78	370	25		82	668	74
21	0.152	-10.01	5.8	231	74	1401	0.8	119	643	626
30	60.1	0.097821	-187	69	732	-23	356	93	607	165
				85	360	30		89	718	78
21	0.154	-10.01	1.8	56	-40	1356	0.4	33	90	141
31	60.1	0.021766	-52	-42	691	-43	80	30	91	66
				16	377	1		42	143	23
22	0.151	-9.99	1.8	81	-47	1412	0.4	32	96	144
12	60.4	0.023013	-46	-37	732	-42	89	31	89	65
				16	361	-8		39	138	24
22	0.151	-9.99	2.2	97	-4	1414	0.5	31	150	153
13	60.3	0.030279	-54	-27	748	-42	109	30	133	68
				22	372	-6		37	166	28
22	0.151	-9.99	2.7	113	-56	1417	0.4	41	293	261
14	60.4	0.040197	-82	-16	715	-40	138	30	232	81
				29	346	-3		44	279	35
22	0.151	-9.99	3.2	129	-54	1409	0.4	58	481	390
15	60.4	0.049579	-104	-4	705	-38	183	33	410	98
				36	338	0		47	461	42

RUN POINT	V/OR VKTS	ALFS,U CTH/S	MRFLAP1 MRPR3 (MEAN)	MRNB1A MRNB2 MRNB3 (MEAN)	MREB1A MREB2 MREB3 (MEAN)	MREB4A MRNB7 MRNB9A (MEAN)	MRFLAP1 MRPR3 (1/2P-P)	MRNB1A MRNB2 MRNB3 (1/2P-P)	MREB1A MREB2 MREB3 (1/2P-P)	MREB4A MRNB7 MRNB9A (1/2P-P)
22	0.151	-9.99	3.8	153	-10	1425	0.5	76	570	457
16	60.4	0.059949	-117	11	728	-36	239	55	510	118
				45	349	4		58	547	53
22	0.151	-9.99	4.2	173	15	1431	0.5	84	575	439
17	60.4	0.068933	-128	24	738	-33	264	65	505	128
				53	349	8		65	537	61
22	0.152	-9.99	4.8	200	47	1422	0.6	98	622	542
18	60.4	0.08013	-143	42	742	-30	340	78	561	143
				64	347	13		74	620	69
22	0.151	-9.99	5.3	225	70	1424	0.7	109	622	585
19	60.4	0.090163	-154	57	748	-26	317	87	582	156
				75	342	18		82	675	74
22	0.152	-9.99	5.8	248	86	1416	0.8	124	643	635
20	60.4	0.100358	-172	74	747	-21	350	94	603	169
				85	331	23		92	717	82
22	0.151	-9.99	6.3	272	97	1406	0.9	141	687	682
21	60.4	0.110253	-189	90	743	-15	389	108	678	184
				108	316	30		101	790	87
22	0.151	-9.99	6.8	295	114	1409	0.9	171	716	756
22	60.4	0.119478	-212	106	748	-11	464	128	723	198
				107	309	36		115	862	101

RUN POINT	V/OR VKTS	ALFS,U CTH/S	MRFLAP1 MRPR3 (MEAN)	MRNB1A MRNB2 MRNB3 (MEAN)	MREB1A MREB2 MREB3 (MEAN)	MREB4A MRNB7 MRNB9A (MEAN)	MRFLAP1 MRPR3 (1/2P-P)	MRNB1A MRNB2 MRNB3 (1/2P-P)	MREB1A MREB2 MREB3 (1/2P-P)	MREB4A MRNB7 MRNB9A (1/2P-P)
24 7	0.151 60.2	-1.99 0.04074	2.8 -41	107 -30 9	20 742 403	1457 -61 -9	0.6 119	42 36 50	202 207 260	245 87 34
24 8	0.15 60.1	-1.99 0.060479	3.9 -90	139 -7 20	-21 699 365	1445 -59 -6	0.4 200	67 55 62	541 494 500	413 121 46
24 9	0.15 60.2	-1.99 0.079756	5 -124	179 20 70	5 701 356	1450 -58 -3	0.6 281	107 86 91	639 622 662	544 161 74
24 10	0.151 60.2	-1.99 0.089614	5.5 -132	200 33 52	27 702 358	1448 -57 -3	0.6 315	120 93 84	673 671 719	628 177 84
24 11	0.151 60.2	-1.99 0.10043	6.1 -146	225 49 65	54 710 358	1409 -55 3	0.6 369	137 107 89	717 735 818	729 199 105
24 12	0.15 60.2	-1.99 0.109572	6.5 -160	247 62 73	69 719 361	1415 -54 9	0.7 399	160 121 103	752 779 877	775 216 115
24 13	0.151 60.3	-1.99 0.119757	7 -177	268 78 91	93 725 361	1409 -52 14	0.9 462	189 129 120	755 758 855	755 222 120

RUN POINT	V/OR VKTS	ALFS,U CTH/S	MRFLAP1 MRPR3 (MEAN)	MRNB1A MRNB2 MRNB3 (MEAN)	MREB1A MREB2 MREB3 (MEAN)	MREB4A MRNB7 MRNB9A (MEAN)	MRFLAP1 MRPR3 (1/2P-P)	MRNB1A MRNB2 MRNB3 (1/2P-P)	MREB1A MREB2 MREB3 (1/2P-P)	MREB4A MRNB7 MRNB9A (1/2P-P)
28 7	0.149 60.2	5 0.058629	3.9 -12	136 -24 1065	-36 706 385	1448 -82 -23	0.5 174	86 58 153	355 341 367	304 95 40
28 8	0.151 60.2	5 0.070249	4.6 -34	152 -11 1046	-49 678 368	1430 -85 -17	0.5 218	110 76 213	519 442 473	391 105 53
28 9	0.15 60.2	5 0.080313	5.1 -50	172 1 848	-44 679 367	1448 -87 -31	0.5 234	120 77 327	576 521 506	468 129 64
28 10	0.15 60.2	5 0.089612	5.7 -63	190 12 457	-28 685 372	1460 -88 -42	0.5 241	126 84 274	593 533 595	548 150 78
28 11	0.151 60.2	5 0.100962	6.3 -79	210 27 782	-8 684 376	1462 -89 -43	0.5 271	156 101 939	611 595 654	585 172 80
28 12	0.151 60.3	5 0.109708	6.8 -89	228 38 1273	13 693 383	1474 -88 -34	0.5 281	197 116 1275	624 607 684	574 185 91
28 13	0.151 60.2	5 0.1119313	7.3 -101	248 51 779	33 702 385	1487 -86 -45	0.5 301	203 122 1376	637 627 682	614 197 103

RUN POINT	V/OR VKTS	ALFS,U CTHS	MRFLAP1 MRPR3 (MEAN)	MRNB1A MRNB2 MRNB3 (MEAN)	MREB1A MREB2 MREB3 (MEAN)	MREB4A MRNB7 MRNB9A (MEAN)	MRFLAP1 MRPR3 (1/2P-P)	MRNB1A MRNB2 MRNB3 (1/2P-P)	MREB1A MREB2 MREB3 (1/2P-P)	MREB4A MRNB7 MRNB9A (1/2P-P)
28	0.151	5	6.8	228	15	1477	0.4	188	623	579
14	60.3	0.110459	-88	39	694	-87	298	111	612	188
				1399	366	-56		1323	679	93
30	0.15	10.01	4.7	137	-102	1397	0.6	74	477	397
12	60	0.070559	-12	-24	646	-97	199	74	459	91
				2355	366	-15		717	490	35
30	0.15	10.01	5.2	155	-102	1408	0.6	89	541	425
13	60.1	0.080138	-28	-14	644	-97	239	80	520	96
				2589	362	-15		0	543	42
30	0.15	10.01	5.8	172	-102	1410	0.6	88	535	440
14	60.1	0.089748	-45	-2	635	-99	233	78	469	114
				2589	357	-9		0	516	44
30	0.151	10.01	6.4	191	-89	1418	0.6	98	557	551
15	60.1	0.099822	-58	9	636	-102	295	83	529	120
				2589	360	-43		0	606	53
30	0.15	10.01	7	212	-71	1436	0.6	162	574	591
16	60.1	0.110732	-71	22	644	-103	266	106	544	137
				2586	370	-48		452	688	65
30	0.15	10.01	7.5	230	-50	1448	0.7	159	602	635
17	59.9	0.119384	-82	33	651	-107	314	115	599	148
				2527	378	-48		525	748	72

RUN POINT	V/OR VKTS	ALFS,U CTH/S	MRFLAP1 MRPR3 (MEAN)	MRNB1A MRNB2 MRNB3 (MEAN)	MREB1A MREB2 MREB3 (MEAN)	MREB4A MRNB7 MRNB9A (MEAN)	MRFLAP1 MRPR3 (1/2P-P)	MRNB1A MRNB2 MRNB3 (1/2P-P)	MREB1A MREB2 MREB3 (1/2P-P)	MREB4A MRNB7 MRNB9A (1/2P-P)
22	0.201	-9.99	1.3	53	-79	1388	0.4	52	74	165
23	80	0.01417	-44	-50	717	-39	78	46	109	77
				5	340	-9		53	159	25
22	0.2	-9.99	2.2	89	-59	1393	0.4	51	215	273
24	80	0.029925	-71	-28	722	-40	105	45	198	82
				18	335	-6		52	267	29
22	0.201	-9.99	2.7	105	-73	1388	0.4	56	379	341
25	80.1	0.039479	-93	-17	704	-41	153	49	348	91
				26	319	-2		51	400	34
22	0.201	-9.99	3.2	129	-24	1394	0.4	64	551	438
26	80.1	0.050337	-108	-1	724	-41	191	48	521	106
				35	328	1		57	549	39
22	0.201	-9.99	3.8	151	-8	1406	0.5	73	564	430
27	80.1	0.059689	-122	13	730	-42	225	50	516	115
				43	329	4		62	541	44
23	0.2	-10	1.3	59	-16	1410	0.5	47	77	167
5	79.9	0.014705	-42	-48	740	-39	75	44	106	75
				4	372	-10		51	168	23
23	0.2	-10	2.1	88	-1	1413	0.4	45	168	250
6	80	0.028391	-65	-30	741	-40	117	42	170	80
				16	367	-7		50	239	27

RUN POINT	V/OR VKTS	ALFS,U CTH/S	MRFLAP1 MRPR3 (MEAN)	MRNB1A MRNB2 MRNB3 (MEAN)	MREB1A MREB2 MREB3 (MEAN)	MREB4A MRNB7 MRNB9A (MEAN)	MRFLAP1 MRPR3 (1/2P-P)	MRNB1A MRNB2 MRNB3 (1/2P-P)	MREB1A MREB2 MREB3 (1/2P-P)	MREB4A MRNB7 MRNB9A (1/2P-P)
23 7	0.2 80.1	-10 0.050584	3.2 -105	131 0 36	32 746 363	1421 -41 0	0.4 193	63 45 59	542 509 552	439 106 38
23 8	0.2 80.1	-10 0.07028	4.2 -132	174 29 53	76 756 363	1427 -41 6	0.5 259	86 60 69	569 508 597	490 128 49
23 9	0.2 80.1	-10 0.090233	5.2 -157	219 59 73	123 767 357	1430 -39 13	0.7 313	127 79 82	632 622 759	664 152 62
23 10	0.2 80.2	-10 0.100477	5.8 -171	242 74 82	125 760 341	1432 -38 18	0.8 349	123 90 94	693 711 872	776 173 70
23 11	0.199 80.2	-10 0.109954	6.3 -190	265 90 95	145 765 336	1434 -35 19	0.8 406	137 98 99	720 755 924	820 184 77
23 12	0.201 80.2	-10 0.115883	6.5 -201	278 100 105	162 765 332	1419 -33 22	1 446	152 102 102	713 745 909	811 189 81
23 13	0.201 80.2	-10 0.120308	6.8 -218	290 109 108	179 775 342	1433 -32 23	1.1 556	177 116 110	717 708 878	797 196 88

RUN POINT	V/OR VKTS	ALFS,U CTHS	MRFLAP1 MRPR3 (MEAN)	MRNB1A MRNB2 MRNB3 (MEAN)	MREB1A MREB2 MREB3 (MEAN)	MREB4A MRNB7 MRNB9A (MEAN)	MRFLAP1 MRPR3 (1/2P-P)	MRNB1A MRNB2 MRNB3 (1/2P-P)	MREB1A MREB2 MREB3 (1/2P-P)	MREB4A MRNB7 MRNB9A (1/2P-P)
23	0.201	-10.02	4.8	188	87	1414	0.6	102	597	561
14	80.1	0.079573	-134	40	749	-41	283	65	572	139
				64	352	9		75	670	56
25	0.2	-2	2.8	115	-37	1403	0.6	73	219	304
5	79.8	0.040783	-9	-32	699	-65	114	65	237	108
				-6	369	-7		71	314	44
25	0.2	-2	3.2	127	-70	1386	0.6	84	347	387
6	79.8	0.049286	-30	-23	664	-66	149	65	312	118
				2	342	-7		72	384	54
25	0.201	-2	3.8	143	-41	1384	0.4	97	516	486
7	79.8	0.059193	-52	-10	672	-67	202	72	460	129
				37	342	-8		79	512	69
25	0.2	-2	4.4	164	-27	1398	0.5	131	584	551
8	79.8	0.070165	-70	4	676	-69	230	89	577	147
				97	340	-10		149	622	89
25	0.201	-2	4.9	182	-4	1395	0.4	150	595	523
9	79.8	0.079651	-75	18	677	-70	282	98	568	161
				198	338	-8		182	616	102
25	0.201	-2	5.5	203	15	1400	0.6	190	648	645
10	79.8	0.090703	-69	33	680	-71	325	110	659	185
				198	342	-4		404	740	114



RUN POINT	V/OR VKTS	ALFS,U CTH/S	MRFLAP1 MRPR3 (MEAN)	MRNB1A MRNB2 MRNB3 (MEAN)	MREB1A MREB2 MREB3 (MEAN)	MREB4A MRNB7 MRNB9A (MEAN)	MRFLAP1 MRPR3 (1/2P-P)	MRNB1A MRNB2 MRNB3 (1/2P-P)	MREB1A MREB2 MREB3 (1/2P-P)	MREB4A
25 11	0.201 79.9	-2 0.100619	6 -97	227 49 146	35 683 331	1401 -71 3	0.6 391	228 137 386	693 741 849	790 206 127
25 12	0.201 79.8	-2 0.110008	6.6 -124	247 63 177	45 687 342	1412 -71 2	0.7 454	242 157 939	732 790 867	829 220 137
25 13	0.201 79.9	-2 0.111777	6.9 -151	265 75 143	65 702 -123	1422 -70 5	0.8 551	228 161 229	744 773 861	762 230 161
28 15	0.2 80	5 0.063276	4.3 -5	132 -24 1582	-80 664 349	1448 -97 -73	0.6 184	94 84 1168	417 416 513	443 118 41
28 16	0.2 80	5 0.069245	4.6 -17	142 -17 1253	-92 650 338	1442 -98 -48	0.5 199	102 86 1161	514 499 571	468 124 49
28 17	0.201 79.9	5 0.080135	5.2 -36	162 -4 1057	-81 646 333	1442 -100 -8	0.5 227	114 85 1026	540 521 596	532 131 60
28 18	0.2 80	5 0.090119	5.8 -52	182 9 1233	-68 649 330	1453 -103 -8	0.5 256	116 83 1007	579 554 684	625 139 67

RUN POINT	V/OR VKTS	ALFS,U CTH/S	MRFLAP1 MRPR3 (MEAN)	MRNB1A MRNB2 MRNB3 (MEAN)	MREB1A MREB2 MREB3 (MEAN)	MREB4A MRNB7 MRNB9A (MEAN)	MRFLAP1 MRPR3 (1/2P-P)	MRNB1A MRNB2 MRNB3 (1/2P-P)	MREB1A MREB2 MREB3 (1/2P-P)	MREB4A MRNB7 MRNB9A (1/2P-P)
28	0.2	5	6.4	200	-54	1448	0.5	143	628	691
19	80	0.100541	-68	22	645	-105	291	85	614	151
				1556	326	-12		1053	760	85
28	0.2	5	6.9	221	-32	1465	0.4	188	645	669
20	80	0.110004	-80	35	656	-107	311	118	683	182
				2320	329	-47		850	771	97
28	0.201	5	7.4	241	-23	1459	0.4	197	674	664
21	80	0.120153	-94	49	649	-109	331	124	704	203
				2290	320	-48		1146	763	105
30	0.2	10.01	5.3	147	-143	1422	0.7	114	570	563
18	80.1	0.078438	-4	-21	616	-116	227	98	587	125
				2548	365	-51		383	701	39
30	0.2	10.01	5.3	147	-143	1422	0.6	134	570	558
19	80.1	0.078359	-6	-21	616	-116	232	101	591	125
				2193	366	-53		642	701	38
30	0.2	10.01	5.9	168	-150	1420	0.6	136	571	529
20	80.1	0.090082	-29	-8	597	-119	250	107	572	132
				2525	349	-21		587	648	47
30	0.201	10.01	6.6	185	-143	1420	0.6	166	602	667
21	80.1	0.100239	-46	4	593	-121	291	117	624	143
				2301	343	-49		542	735	56

RUN POINT	V/OR VKTS	ALFS,U CTH/S	MRFLAP1 MRPR3 (MEAN)	MRNB1A MRNB2 MRNB3 (MEAN)	MREB1A MREB2 MREB3 (MEAN)	MREB4A MRNB7 MRNB9A (MEAN)	MRFLAP1 MRPR3 (1/2P-P)	MRNB1A MRNB2 MRNB3 (1/2P-P)	MREB1A MREB2 MREB3 (1/2P-P)	MREB4A MRNB7 MRNB9A (1/2P-P)
30	0.201	10.01	7.1	205	-124	1424	0.6	140	638	757
22	80.1	0.110792	-64	16	595	-122	299	109	702	155
				2583	339	-48		252	861	61
30	0.201	10.01	7.7	224	-113	1414	0.6	138	654	809
23	80.1	0.121245	-82	29	586	-123	324	106	724	165
				2521	327	-36		546	917	65
63	0.251	-15	-0.2	103	21	1218	0.5	79	482	384
28	100.3	0.031099	-162	-5	754	-15	175	57	412	99
				350	300	-33		66	451	30
63	0.252	-15	0.3	127	41	1215	0.6	94	548	453
29	100.4	0.040903	-174	11	757	-17	203	60	504	103
				359	300	-30		64	535	32
63	0.251	-15	0.8	151	71	1224	0.6	122	592	568
30	100.2	0.050608	-191	27	773	-18	247	69	550	109
				371	305	-28		69	619	36
63	0.251	-15	1.3	176	98	1226	0.7	138	622	618
31	100.2	0.061048	-203	43	781	-21	266	77	590	122
				368	307	-25		74	679	39
63	0.252	-15	1.3	176	98	1226	0.6	138	613	616
32	100.2	0.061144	-203	43	779	-21	268	76	583	123
				363	306	-25		74	689	39

RUN POINT	V/OR VKTS	ALFS,U CTH/S	MRFLAP1 MRPR3 (MEAN)	MRNB1A MRNB2 MRNB3 (MEAN)	MREB1A MREB2 MREB3 (MEAN)	MREB4A MRNB7 MRNB9A (MEAN)	MRFLAP1 MRPR3 (1/2P-P)	MRNB1A MRNB2 MRNB3 (1/2P-P)	MREB1A MREB2 MREB3 (1/2P-P)	MREB4A MRNB7 MRNB9A (1/2P-P)
63	0.251	-15	1.8	200	130	1237	0.7	150	631	675
33	100.2	0.072299	-217	58	794	-22	299	87	617	137
				370	311	-22		79	756	48
63	0.251	-15	2.3	225	162	1241	0.9	160	651	743
34	100.3	0.080806	-230	75	806	-23	343	91	650	150
				380	315	-18		86	817	52
63	0.251	-15	2.7	251	196	1239	0.9	167	663	762
35	100.3	0.090196	-241	91	818	-23	363	99	699	162
				390	319	-15		92	871	58
23	0.249	-10.01	2.2	81	-27	1395	0.5	65	317	345
15	99.9	0.03031	-83	-29	728	-36	157	63	315	100
				21	353	-1		70	374	31
23	0.249	-10.01	2.5	97	11	1402	0.5	72	488	420
16	99.9	0.037123	-95	-18	749	-37	167	65	446	108
				41	364	2		69	497	32
23	0.251	-10.01	3.2	127	39	1399	0.6	88	550	450
17	99.9	0.050367	-113	1	752	-40	212	68	482	116
				58	362	5		70	518	34
23	0.25	-10.01	3.7	151	62	1402	0.6	105	584	560
18	99.9	0.060275	-128	17	758	-42	240	74	536	127
				65	359	7		76	624	41

RUN POINT	V/OR VKTS	ALFS,U CTH/S	MRFLAP1 MRPR3 (MEAN)	MRNB1A			MREB1A			MRNB1A			MRFLAP1 MRPR3 (1/2P-P)			MREB1A			MRNB1A			MREB4A		
				MRNB2 MRNB3 (MEAN)	MREB2 MREB3 (MEAN)	MREB4A MRNB7 MRNB9A (MEAN)	MRNB2 MRNB3 (MEAN)	MREB2 MREB3 (MEAN)	MREB4A MRNB7 MRNB9A (MEAN)	MRNB2 MRNB3 (1/2P-P)	MREB2 MREB3 (1/2P-P)	MREB4A MRNB7 MRNB9A (MEAN)	MRNB2 MRNB3 (1/2P-P)	MREB2 MREB3 (1/2P-P)	MRNB2 MRNB3 (1/2P-P)	MREB2 MREB3 (1/2P-P)	MRNB2 MRNB3 (1/2P-P)	MREB2 MREB3 (1/2P-P)	MRNB2 MRNB3 (1/2P-P)	MREB2 MREB3 (1/2P-P)	MRNB2 MRNB3 (1/2P-P)	MREB2 MREB3 (1/2P-P)	MRNB2 MRNB3 (1/2P-P)	MREB2 MREB3 (1/2P-P)
23 19	0.251 100	-10.01 0.068641	4.1 -139	168 30 72	83 757 357	1395 -43 10	0.7	120	607	622	140	46												
23 20	0.248 100	-10.01 0.079208	4.7 -154	199 49 88	119 771 359	1404 -45 13	0.8	143	645	706	160	55												
23 21	0.25 100	-10.01 0.090581	5.2 -168	223 65 94	141 778 357	1411 -46 9	0.8	152	688	831	176	62												
23 22	0.25 100	-10.01 0.100551	5.7 -188	246 82 123	161 777 351	1401 -45 11	0.9	159	725	876	196	68												
23 23	0.251 100.1	-10.01 0.109185	6.2 -215	267 97 191	181 783 347	1402 -45 16	1	172	729	876	211	73												
23 24	0.25 100	-10.01 0.11616	6.5 -240	295 116 117	221 826 356	1464 -46 27	1.4	228	846	914	219	107												
25 14	0.25 99.8	-2 0.037787	2.6 6	98 -40 -3	-44 694 362	1394 -67 -11	0.6	84	212	391	123	43												

RUN POINT	V/OR VKTS	ALFS,U CTH/S	MRFLAP1 MRPR3 (MEAN)	MRNB1A MRNB2 MRNB3 (MEAN)	MREB1A MREB2 MREB3 (MEAN)	MREB4A MRNB7 MRNB9A (MEAN)	MRFLAP1 MRPR3 (1/2P-P)	MRNB1A MRNB2 MRNB3 (1/2P-P)	MREB1A MREB2 MREB3 (1/2P-P)	MREB4A MRNB7 MRNB9A (1/2P-P)
25	0.252	-2	3.3	120	-64	1374	0.6	99	453	502
15	99.7	0.050663	-26	-23	673	-71	148	86	443	143
				37	338	-8		106	533	57
25	0.251	-2	3.9	141	-36	1386	0.5	104	573	574
16	99.8	0.060621	-29	-10	686	-73	295	91	550	156
				59	341	-6		115	616	66
25	0.252	-2	4.4	158	-17	1381	0.6	121	594	598
17	99.8	0.069973	-35	4	688	-75	212	93	565	166
				97	340	-5		116	634	78
25	0.251	-2	5	179	1	1389	0.6	128	585	636
18	99.8	0.080155	-28	18	694	-78	368	93	565	175
				151	337	-2		141	646	91
25	0.25	-2	5.5	201	11	1391	0.6	146	627	723
19	99.9	0.089475	-71	32	692	-79	316	109	624	190
				143	320	0		142	728	106
25	0.251	-2	6.1	223	25	1385	0.8	189	678	830
20	99.8	0.100379	28	47	688	-80	378	123	715	212
				223	316	4		485	874	121
25	0.251	-2	6.3	235	43	1378	0.8	201	730	900
21	99.8	0.104838	137	55	697	-81	397	124	798	223
				243	346	6		463	965	120

RUN POINT	V/OR VKTS	ALFS,U CTH/S	MRFLAP1 MRPR3 (MEAN)	MRNB1A MRNB2 MRNB3 (MEAN)	MREB1A MREB2 MREB3 (MEAN)	MREB4A MRNB7 MRNB9A (MEAN)	MRFLAP1 MRPR3 (1/2P-P)	MRNB1A MRNB2 MRNB3 (1/2P-P)	MREB1A MREB2 MREB3 (1/2P-P)	MREB4A MRNB7 MRNB9A (1/2P-P)
29 13	0.25 99.5	5 0.070069	4.7 -24	140 -22 1185	-128 635 379	1444 -106 -14	0.6 224	163 132 1210	547 573 673	561 149 44
29 14	0.25 99.7	5 0.079867	5.3 -42	157 -10 640	-121 628 368	1439 -108 -10	0.6 232	145 133 924	557 638 762	635 164 57
29 15	0.25 99.7	5 0.090516	5.9 -59	177 2 548	-102 633 364	1448 -109 -14	0.6 254	152 128 1300	590 670 827	744 177 67
29 16	0.25 99.7	5 0.099872	6.4 -76	195 15 497	-90 625 351	1434 -110 -8	0.5 263	151 143 630	625 734 875	782 186 67
29 17	0.25 99.7	5 0.110759	7 -93	216 29 783	-86 615 323	1433 -110 -34	0.5 295	169 137 1308	614 749 974	845 198 78
29 18	0.251 99.7	5 0.119931	7.5 -112	234 43 457	-79 601 275	1418 -110 -35	0.5 351	166 152 1322	684 786 1024	943 209 87
29 19	0.251 99.7	5 0.120031	7.5 -112	233 42 364	-80 600 273	1418 -110 -44	0.5 350	170 149 1329	664 786 1023	940 211 85

RUN POINT	V/OR VKTS	ALFS,U CTH/S	MRFLAP1 MRPR3 (MEAN)	MRNB1A MRNB2 MRNB3 (MEAN)	MREB1A MREB2 MREB3 (MEAN)	MREB4A MRNB7 MRNB9A (MEAN)	MRFLAP1 MRPR3 (1/2P-P)	MRNB1A MRNB2 MRNB3 (1/2P-P)	MREB1A MREB2 MREB3 (1/2P-P)	MREB4A MRNB7 MRNB9A (1/2P-P)
31	0.251	10.01	5.6	153	-180	1431	0.7	179	628	698
11	99.9	0.083113	4	-24	608	-124	257	140	679	163
				2356	405	-64		0	826	51
31	0.251	10.01	6	164	-194	1425	0.7	171	620	661
12	99.9	0.090232	-20	-17	588	-125	271	143	684	168
				2356	387	-63		16	818	51
31	0.25	10.01	6.6	179	-186	1420	0.7	192	668	818
13	100	0.10009	-43	-7	580	-126	305	156	787	182
				2173	372	-64		675	974	57
31	0.251	10.01	7.2	196	-169	1406	0.7	203	737	945
14	99.9	0.11028	-61	4	571	-127	330	161	902	201
				2310	360	-61		461	1094	67
31	0.251	10.01	7.8	214	-166	1397	0.5	213	747	1031
15	100	0.120413	-82	16	554	-127	365	170	952	215
				2332	302	-56		488	1200	67
31	0.252	10.01	5.6	147	-160	1438	0.7	165	637	693
16	100.1	0.082877	-2	-27	616	-124	251	138	697	167
				2356	380	-67		0	818	52



RUN POINT	V/OR VKTS	ALFS,U CTH/S	MRFLAP1 MRPR3 (MEAN)	MRNB1A MRNB2 MRNB3 (MEAN)	MREB1A MREB2 MREB3 (MEAN)	MREB4A MRNB7 MRNB9A (MEAN)	MRFLAP1 MRPR3 (1/2P-P)	MRNB1A MRNB2 MRNB3 (1/2P-P)	MREB1A MREB2 MREB3 (1/2P-P)	MREB4A MRNB7 MRNB9A (1/2P-P)
36 6	0.228 91.7	-10 0.065467	4 -141	169 23 53	71 763 320	1281 -43 5	0.4 231	102 71 75	578 532 611	535 126 43
36 7	0.251 100.6	-10 0.065892	4 -148	171 26 55	84 770 322	1278 -42 6	0.6 256	119 80 81	599 554 670	615 135 45
36 8	0.227 91.3	-10 0.065317	4 -141	167 22 53	65 757 313	1282 -42 5	0.5 237	103 70 75	568 522 599	523 125 42
36 9	0.201 80.2	-10 0.065121	4 -131	164 20 50	52 742 307	1275 -41 5	0.4 235	82 55 68	547 482 538	439 122 46
36 10	0.178 71.1	-10 0.065184	4 -124	163 18 48	45 735 304	1275 -37 6	0.3 243	78 45 65	549 487 511	402 120 51
36 11	0.151 60.4	-10 0.064857	4 -117	161 15 45	34 728 300	1278 -33 8	0.4 244	84 59 62	546 485 525	419 120 54
36 22	0.15 60.3	-10 0.06513	4.1 -119	161 15 43	35 723 295	1272 -33 8	0.4 235	77 62 63	547 489 523	426 123 56

RUN POINT	V/OR VKTS	ALFS,U CTH/S	MRFLAP1 MRPR3 (MEAN)	MRNB1A MRNB2 MRNB3 (MEAN)	MREB1A MREB2 MREB3 (MEAN)	MREB4A MRNB7 MRNB9A (MEAN)	MRFLAP1 MRPR3 (1/2P-P)	MRNB1A MRNB2 MRNB3 (1/2P-P)	MREB1A MREB2 MREB3 (1/2P-P)	MREB4A MRNB7 MRNB9A (1/2P-P)
36	0.124	-10	4.1	161	28	1268	0.4	81	562	436
23	50	0.065259	-119	14	717	-28	235	72	502	123
				42	292	14		63	533	64
36	0.101	-10	4	159	23	1258	0.5	81	563	426
24	40.5	0.064861	-125	12	712	-18	239	72	506	122
				41	285	22		64	523	72
36	0.091	-10	4	159	25	1249	0.5	78	559	438
25	36.6	0.065454	-130	12	711	-10	248	72	500	121
				41	282	27		68	524	73
36	0.081	-10	4	157	24	1239	0.5	73	575	463
26	32.6	0.065056	-136	11	708	0	238	63	519	117
				41	277	34		63	564	74
36	0.071	-10	4	156	24	1228	0.4	80	598	492
27	28.6	0.064757	-144	11	706	11	233	60	560	115
				43	270	41		56	611	79
36	0.061	-10	4	155	23	1209	0.5	83	591	467
28	24.3	0.064791	-155	11	701	23	215	60	564	114
				44	261	47		50	605	72
36	0.051	-10	4	158	25	1198	0.4	88	572	420
29	20.5	0.065376	-168	13	700	36	202	55	554	116
				47	250	55		47	552	69

RUN POINT	V/OR VKTS	ALFS,U CTH/S	MRFLAP1 MRPR3 (MEAN)	MRNB1A MRNB2 MRNB3 (MEAN)	MREB1A MREB2 MREB3 (MEAN)	MREB4A MRNB7 MRNB9A (MEAN)	MRFLAP1 MRPR3 (1/2P-P)	MRNB1A MRNB2 MRNB3 (1/2P-P)	MREB1A MREB2 MREB3 (1/2P-P)	MREB4A MRNB7 MRNB9A (1/2P-P)
36	0.042	-10	4	157	21	1179	0.3	99	538	374
30	16.7	0.064864	-178	13	693	46	184	55	489	114
				49	237	62		37	506	69
36	0.031	-10	4	159	26	1174	0.3	92	395	240
31	12.3	0.065191	-186	16	695	47	149	51	328	90
				51	235	72		33	306	60
36	0.021	-10	4	159	40	1196	0.3	62	275	203
32	8.5	0.064771	-183	15	713	34	194	38	242	75
				51	253	73		30	239	48
36	0.006	-10	3.9	162	56	1215	0.6	107	152	227
33	2.4	0.064534	-190	17	728	34	93	85	198	104
				51	296	72		64	237	67
51	0.25	-4.99	4	162	27	1252	0.4	98	539	516
5	100	0.064099	-64	6	729	-63	218	93	473	157
				25	337	1		95	555	56
51	0.2	-4.99	4.1	164	11	1247	0.4	93	557	467
6	79.8	0.065135	-51	8	711	-58	230	72	518	142
				26	322	1		79	581	64
51	0.15	-4.99	4.1	164	2	1245	0.4	102	584	535
7	60.1	0.065034	-47	7	706	-50	257	85	575	152
				25	318	3		71	627	70

RUN POINT	V/OR VKTS	ALFS,U CTH/S	MRFLAP1 MRPR3 (MEAN)	MRNB1A MRNB2 MRNB3 (MEAN)	MREB1A MREB2 MREB3 (MEAN)	MREB4A MRNB7 MRNB9A (MEAN)	MRFLAP1 MRPR3 (1/2P-P)	MRNB1A MRNB2 MRNB3 (1/2P-P)	MREB1A MREB2 MREB3 (1/2P-P)	MREB4A MRNB7 MRNB9A (1/2P-P)
51 8	0.125 49.8	-4.99 0.064797	4.1 -49	163 6 26	7 710 319	1245 -44 7	0.6 270	110 97 84	626 632 655	569 155 73
51 9	0.101 40.2	-4.99 0.064748	4.1 -58	164 6 27	14 713 317	1237 -33 15	0.6 269	163 125 104	643 657 681	585 162 76
51 10	0.091 36.4	-4.99 0.06462	4 -63	164 7 27	19 715 316	1231 -25 20	0.6 272	152 132 105	650 662 700	582 160 80
51 11	0.081 32.3	-4.99 0.064971	4 -71	165 8 29	24 716 310	1224 -14 26	0.7 261	148 131 106	649 640 710	586 162 86
51 12	0.071 28.3	-4.99 0.065143	4 -81	166 9 32	28 716 302	1210 -1 32	0.7 268	120 110 99	645 609 702	595 158 86
51 13	0.06 24	-4.99 0.065047	4 -97	164 10 34	27 710 288	1187 17 42	0.6 245	137 113 85	644 646 711	547 154 84
51 14	0.05 20.1	-4.99 0.064704	4 -111	164 11 37	27 704 271	1162 34 50	0.6 240	103 85 69	632 627 687	552 141 79

RUN POINT	V/OR VKTS	ALFS,U CTH/S	MRFLAP1 MRPR3 (MEAN)	MRNB1A MRNB2 MRNB3 (MEAN)	MREB1A MREB2 MREB3 (MEAN)	MREB4A MRNB7 MRNB9A (MEAN)	MRFLAP1 MRPR3 (1/2P-P)	MRNB1A MRNB2 MRNB3 (1/2P-P)	MREB1A MREB2 MREB3 (1/2P-P)	MREB4A MRNB7 MRNB9A (1/2P-P)
51 15	0.041 16.3	-4.99 0.064964	4 -130	165 14 41	23 695 248	1137 55 60	0.5 208	97 64 48	566 547 561	420 128 70
51 16	0.029 11.8	-4.99 0.064603	4 -139	165 16 44	19 689 238	1127 57 69	0.3 159	108 59 34	474 384 371	267 117 62
51 17	0.02 7.9	-4.99 0.065017	4 -139	167 16 43	35 712 266	1167 37 76	0.4 113	82 48 40	304 245 234	177 78 54
51 18	0.011 4.5	-4.99 0.064533	3.9 -135	167 14 41	69 741 299	1191 31 73	0.5 112	172 117 72	250 286 268	274 112 59
32 7	0.252 100.5	-2 0.065272	4.2 -96	152 -3 20	-14 704 369	1346 -75 -3	0.4 192	111 93 105	570 544 612	582 162 74
32 8	0.201 80.3	-2 0.065939	4.2 -84	154 -1 22	-20 691 362	1336 -69 -2	0.4 391	127 84 82	541 522 603	530 141 82
32 9	0.15 60.1	-2 0.065799	4.2 -84	155 0 24	-15 694 359	1332 -58 0	0.4 233	86 69 68	575 549 587	478 131 56

RUN POINT	V/OR VKTS	ALFS,U CTH/S	MRFLAP1 MRPR3 (MEAN)	MRNB1A MRNB2 MRNB3 (MEAN)	MREB1A MREB2 MREB3 (MEAN)	MREB4A MRNB7 MRNB9A (MEAN)	MRFLAP1 MRPR3 (1/2P-P)	MRNB1A MRNB2 MRNB3 (1/2P-P)	MREB1A MREB2 MREB3 (1/2P-P)	MREB4A MRNB7 MRNB9A (1/2P-P)
32	0.125	-2	4.1	155	-2	1322	0.5	114	582	505
10	50.1	0.065132	-87	0	701	-51	241	96	552	139
				26	357	2		81	595	66
32	0.1	-2	4.1	157	11	1310	0.6	176	657	597
11	40.2	0.065072	-97	2	706	-42	248	144	664	161
				28	335	8		111	670	86
32	0.08	-2	4.1	161	21	1285	0.7	203	699	677
12	32	0.065374	-109	6	705	-27	252	174	756	190
				34	323	18		142	793	103
32	0.061	-2	4.1	161	30	1255	0.8	159	689	683
13	24.3	0.065427	-138	9	706	4	264	144	704	183
				41	300	36		119	826	95
32	0.05	-2	4.1	161	25	1223	0.7	133	654	600
14	20.1	0.065203	-157	12	696	31	247	112	652	166
				45	280	47		88	739	88
32	0.04	-2	4.1	164	23	1196	0.4	120	599	450
15	16	0.06572	-180	15	688	57	206	80	605	135
				51	260	59		59	587	75
32	0.03	-2	4.1	162	9	1178	0.4	97	519	330
16	12.1	0.065522	-195	17	674	63	161	55	458	124
				53	243	69		39	448	62

RUN POINT	V/OR VKTS	ALFS,U CTH/S	MRFLAP1 MRPR3 (MEAN)	MRNB1A MRNB2 MRNB3 (MEAN)	MREB1A MREB2 MREB3 (MEAN)	MREB4A MRNB7 MRNB9A (MEAN)	MRFLAP1 MRPR3 (1/2P-P)	MRNB1A MRNB2 MRNB3 (1/2P-P)	MREB1A MREB2 MREB3 (1/2P-P)	MREB4A MRNB7 MRNB9A (1/2P-P)
32 17	0.02 8.1	-2 0.065334	4 -194	162 15 52	31 702 267	1221 37 73	0.4 194	77 47 42	332 291 269	207 82 55
32 18	0.011 4.2	-2 0.068691	4.1 -195	176 26 57	70 727 274	1235 31 73	0.6 113	138 109 72	210 286 296	234 102 65
32 19	0 0	-2 0.065556	4 -200	163 18 59	42 706 239	1215 43 81	0.8 104	148 115 95	269 335 343	342 144 87
34 5	0.251 99.7	-2 0.065585	4.2 -81	158 -3 47	7 727 385	1322 -75 -3	0.5 200	111 92 110	583 574 629	594 164 76
34 6	0.22 87.3	-2 0.065619	4.2 -78	157 -3 45	-1 715 374	1311 -73 -2	0.4 214	98 85 94	566 525 605	550 143 75
34 7	0.198 78.5	-2 0.065069	4.2 -74	157 -2 45	-5 710 372	1311 -69 -2	0.4 225	116 83 84	550 523 626	558 142 81
34 8	0.174 69	-2 0.065435	4.2 -74	158 -1 46	0 710 364	1307 -63 -1	0.4 241	68 47 68	558 519 583	504 125 60

RUN POINT	V/OR VKTS	ALFS,U CTH/S	MRFLAP1 MRPR3 (MEAN)	MRNB1A MRNB2 MRNB3 (MEAN)	MREB1A MREB2 MREB3 (MEAN)	MREB4A MRNB7 MRNB9A (MEAN)	MRFLAP1 MRPR3 (1/2P-P)	MRNB1A MRNB2 MRNB3 (1/2P-P)	MREB1A MREB2 MREB3 (1/2P-P)	MREB4A MRNB7 MRNB9A (1/2P-P)
34 9	0.152 60.5	-2 0.06518	4.2 -74	159 -1 47	9 717 366	1309 -58 0	0.3 236	77 66 70	580 565 608	492 130 53
34 10	0.124 49.2	-2 0.065688	4.3 -80	161 0 49	21 721 364	1298 -51 3	0.5 261	119 100 86	604 578 605	534 140 68
34 11	0.102 40.7	-2 0.065487	4.2 -86	163 2 51	31 729 352	1294 -43 8	0.5 261	186 146 112	646 664 668	604 161 86
34 12	0.092 36.8	-2 0.064849	4.2 -91	162 3 53	35 729 346	1284 -37 12	0.7 249	197 164 129	668 687 721	638 176 99
34 13	0.082 32.8	-2 0.065432	4.2 -101	165 5 57	44 732 351	1271 -28 18	0.8 247	197 173 143	694 741 774	674 188 104
34 14	0.072 28.8	-2 0.06496	4.1 -111	165 6 58	47 734 346	1262 -18 25	0.8 261	185 168 140	700 741 807	670 193 105
34 15	0.061 24.5	-2 0.065022	4.1 -129	165 8 63	51 731 324	1235 3 36	0.7 260	163 145 123	692 698 820	670 189 98



RUN POINT	V/OR VKTS	ALFS,U CTH/S	MRFLAP1 MRPR3 (MEAN)	MRNB1A MRNB2 MRNB3 (MEAN)	MREB1A MREB2 MREB3 (MEAN)	MREB4A MRNB7 MRNB9A (MEAN)	MRFLAP1 MRPR3 (1/2P-P)	MRNB1A MRNB2 MRNB3 (1/2P-P)	MREB1A MREB2 MREB3 (1/2P-P)	MREB4A MRNB7 MRNB9A (1/2P-P)
34 16	0.053 20.9	-2 0.065025	4.1 -148	164 11 66	48 723 304	1208 27 45	0.7 242	144 121 98	653 658 750	593 172 95
34 17	0.042 16.8	-2 0.064817	4.1 -169	164 13 71	45 716 283	1180 53 56	0.4 211	127 95 66	603 608 626	484 144 81
34 18	0.032 12.9	-2 0.06507	4.1 -187	165 16 75	37 704 261	1155 65 69	0.4 178	100 53 40	526 469 459	321 128 63
38 5	0.25 99.7	5 0.064728	4.3 -24	142 -25 -6	-80 679 411	1373 -104 -11	0.7 192	147 124 133	530 552 611	542 144 44
38 6	0.224 89.3	5 0.06487	4.3 -25	147 -21 -2	-73 679 405	1364 -102 -10	0.6 195	140 105 109	489 483 600	498 132 54
38 7	0.198 79	5 0.06486	4.3 -26	150 -18 0	-57 686 402	1359 -97 -8	0.5 189	96 84 89	429 423 516	441 115 44
38 8	0.174 69.2	5 0.064755	4.3 -32	150 -16 2	-52 682 394	1343 -91 -7	0.5 218	73 63 70	427 409 476	383 106 42

RUN POINT	V/OR VKTS	ALFS,U CTH/S	MRFLAP1 MRPR3 (MEAN)	MRNB1A MRNB2 MRNB3 (MEAN)	MREB1A MREB2 MREB3 (MEAN)	MREB4A MRNB7 MRNB9A (MEAN)	MRFLAP1 MRPR3 (1/2P-P)	MRNB1A MRNB2 MRNB3 (1/2P-P)	MREB1A MREB2 MREB3 (1/2P-P)	MREB4A MRNB7 MRNB9A (1/2P-P)
38 9	0.151 60.3	5 0.065069	4.3 -40	151 -15 5	-49 683 387	1337 -85 -7	0.5 212	82 65 62	474 426 440	349 99 49
38 10	0.151 60.3	5 0.06509	4.3 -40	150 -16 5	-53 680 383	1335 -85 -7	0.5 211	79 66 65	474 426 435	347 99 49
38 11	0.125 49.9	5 0.06502	4.3 -49	149 -15 7	-20 699 395	1327 -76 -4	0.5 215	94 74 68	496 435 399	334 111 46
38 12	0.101 40.5	5 0.065354	4.2 -68	147 -16 9	-11 711 395	1315 -62 0	0.5 229	174 109 96	515 416 395	323 126 82
38 13	0.09 35.9	5 0.065745	4.2 -80	146 -14 14	3 716 384	1296 -53 2	0.6 239	191 134 114	548 452 434	331 144 77
38 14	0.081 32.5	5 0.065004	4.2 -87	147 -12 17	18 724 385	1284 -47 5	0.6 258	244 201 136	588 513 526	393 183 82
38 15	0.071 28.4	5 0.064612	4.2 -101	151 -9 23	39 743 378	1284 -39 10	0.7 265	288 231 172	603 644 670	522 218 97

RUN POINT	V/OR VKTS	ALFS,U CTH/S	MRFLAP1 MRPR3 (MEAN)	MRNB1A MRNB2 MRNB3 (MEAN)	MREB1A MREB2 MREB3 (MEAN)	MREB4A MRNB7 MRNB9A (MEAN)	MRFLAP1 MRPR3 (1/2P-P)	MRNB1A MRNB2 MRNB3 (1/2P-P)	MREB1A MREB2 MREB3 (1/2P-P)	MREB4A MRNB7 MRNB9A (1/2P-P)
38 16	0.06 24.1	5 0.065144	4.2 -121	158 1 33	54 737 366	1279 -27 17	0.9 266	334 260 195	685 753 807	771 271 124
38 17	0.052 20.6	5 0.065297	4.1 -144	161 8 43	44 719 329	1231 -4 29	0.8 256	244 220 175	677 717 817	770 268 113
38 18	0.042 16.8	5 0.064951	4.1 -173	165 15 51	46 709 286	1187 42 44	0.7 239	176 142 106	643 689 754	649 206 101
38 19	0.031 12.4	5 0.065062	4.1 -204	165 19 55	38 692 256	1151 73 63	0.4 198	135 83 58	554 526 503	361 134 73
38 20	0.021 8.4	5 0.065404	4.1 -207	164 18 54	39 698 270	1169 55 68	0.4 145	106 63 42	448 363 327	253 125 61
38 21	0.01 3.8	5 0.065216	4.1 -207	182 31 67	107 751 308	1201 34 75	0.6 117	143 104 86	291 297 349	317 133 72
37 5	0.251 100.3	-10 0.08011	4.7 -169	200 49 64	118 784 336	1261 -45 9	0.7 281	141 95 95	634 632 779	703 158 54

RUN POINT	V/OR VKTS	ALFS,U CTH/S	MRFLAP1 MRPR3 (MEAN)	MRNB1A MRNB2 MRNB3 (MEAN)	MREB1A MREB2 MREB3 (MEAN)	MREB4A MRNB7 MRNB9A (MEAN)	MRFLAP1 MRPR3 (1/2P-P)	MRNB1A MRNB2 MRNB3 (1/2P-P)	MREB1A MREB2 MREB3 (1/2P-P)	MREB4A MRNB7 MRNB9A (1/2P-P)
37 6	0.2 80	-10 0.080654	4.8 -151	194 45 59	87 752 319	1261 -41 8	0.5 276	109 67 78	582 552 676	563 140 55
37 7	0.15 60.1	-10 0.081279	4.9 -142	195 41 55	71 742 314	1268 -29 14	0.6 296	103 78 74	598 536 589	505 140 70
37 8	0.1 40.3	-10 0.080223	4.8 -152	190 37 52	49 726 298	1244 -8 33	0.6 290	100 75 69	588 522 571	489 146 85
37 9	0.091 36.4	-10 0.079761	4.8 -158	189 36 52	47 722 290	1234 2 39	0.6 282	100 70 71	583 519 561	463 142 90
37 10	0.081 32.3	-10 0.08008	4.8 -168	187 35 53	40 714 280	1218 16 47	0.6 280	103 64 62	595 544 580	491 132 92
37 11	0.071 28.4	-10 0.079829	4.8 -177	185 35 53	35 707 268	1201 29 54	0.5 271	96 65 59	602 564 609	513 128 93
37 12	0.06 23.9	-10 0.080131	4.8 -189	185 36 55	33 700 255	1178 43 61	0.5 262	100 59 48	613 574 615	507 132 85

RUN POINT	V/OR VKTS	ALFS,U CTH/S	MRFLAP1 MRPR3 (MEAN)	MRNB1A MRNB2 MRNB3 (MEAN)	MREB1A MREB2 MREB3 (MEAN)	MREB4A MRNB7 MRNB9A (MEAN)	MRFLAP1 MRPR3 (1/2P-P)	MRNB1A MRNB2 MRNB3 (1/2P-P)	MREB1A MREB2 MREB3 (1/2P-P)	MREB4A MRNB7 MRNB9A (1/2P-P)
37 13	0.05 20.1	-10 0.080587	4.8 -201	187 38 58	32 693 239	1155 55 67	0.4 247	108 59 47	618 595 626	490 126 82
37 14	0.041 16.3	-10 0.079803	4.8 -210	186 39 61	31 687 226	1137 64 74	0.3 221	131 71 39	580 547 551	429 126 76
37 15	0.029 11.7	-10 0.079412	4.7 -207	185 39 61	44 698 238	1143 58 84	0.3 184	98 49 34	515 438 419	315 95 61
37 16	0.019 7.7	-10 0.080282	4.7 -202	191 40 62	71 727 267	1179 46 82	0.4 156	91 61 33	422 347 325	251 91 52
37 17	0.011 4.6	-10 0.079897	4.8 -206	199 45 62	84 739 286	1205 41 82	0.7 131	144 98 88	403 358 401	369 98 65
37 18	0.011 4.6	-10 0.081746	4.8 -205	200 46 64	99 750 286	1203 45 85	0.5 115	116 91 87	263 282 290	327 97 64
53 5	0.25 100.1	-5 0.0794	4.8 -101	197 31 49	59 742 330	1220 -69 4	0.5 265	129 104 101	576 580 700	595 166 70

RUN POINT	V/OR VKTS	ALFS,U CTHS	MRFLAP1 MRPR3 (MEAN)	MRNB1A MRNB2 MRNB3 (MEAN)	MREB1A MREB2 MREB3 (MEAN)	MREB4A MRNB7 MRNB9A (MEAN)	MRFLAP1 MRPR3 (1/2P-P)	MRNB1A MRNB2 MRNB3 (1/2P-P)	MREB1A MREB2 MREB3 (1/2P-P)	MREB4A MRNB7 MRNB9A (1/2P-P)
53 6	0.227 90.9	-5 0.079473	4.8 -94	194 29 52	45 726 323	1217 -67 4	0.5 260	111 97 92	571 537 635	560 156 66
53 7	0.2 80	-5 0.080382	4.9 -89	197 31 48	39 717 311	1218 -62 5	0.5 281	110 89 85	587 543 639	559 160 77
53 8	0.176 70.7	-5 0.079678	4.9 -83	196 29 44	31 715 313	1218 -57 5	0.5 299	123 90 78	592 566 661	596 170 81
53 9	0.15 60.2	-5 0.079517	4.9 -83	197 30 46	31 712 313	1210 -51 8	0.6 305	139 114 87	626 643 716	640 171 90
53 10	0.125 49.9	-5 0.07991	4.9 -89	198 30 45	33 713 310	1207 -44 14	0.7 316	151 130 110	672 699 748	667 172 100
53 12	0.096 38.5	-5 0.079179	4.7 -108	196 29 47	35 713 301	1185 -21 30	0.8 299	171 147 117	678 707 743	640 179 97
53 13	0.091 36.6	-5 0.079765	4.8 -110	199 31 49	38 711 298	1179 -19 31	0.8 312	171 147 119	682 715 754	660 181 98

RUN POINT	V/OR VKTS	ALFS,U CTH/S	MRFLAP1 MRPR3 (MEAN)	MRNB1A MRNB2 MRNB3 (MEAN)	MREB1A MREB2 MREB3 (MEAN)	MREB4A MRNB7 MRNB9A (MEAN)	MRFLAP1 MRPR3 (1/2P-P)	MRNB1A MRNB2 MRNB3 (1/2P-P)	MREB1A MREB2 MREB3 (1/2P-P)	MREB4A MRNB7 MRNB9A (1/2P-P)
53 14	0.08 32.2	-5 0.079733	4.8 -123	199 31 49	36 709 287	1170 -4 39	0.8 300	147 130 110	668 672 768	673 169 96
53 15	0.07 28.3	-5 0.079576	4.8 -135	198 32 50	31 701 271	1148 11 47	0.7 295	158 127 111	664 666 771	656 165 94
53 16	0.06 24	-5 0.079684	4.8 -153	198 33 53	33 701 254	1128 30 56	0.7 293	119 104 89	647 610 697	617 158 95
53 17	0.051 20.3	-5 0.079614	4.8 -168	198 36 57	35 692 235	1094 47 64	0.5 277	111 77 65	663 657 742	621 146 87
53 18	0.041 16.3	-5 0.079979	4.8 -185	200 38 61	29 682 210	1072 66 74	0.4 234	112 60 46	630 615 654	520 137 75
53 19	0.029 11.8	-5 0.0799	4.7 -185	200 40 62	51 699 232	1086 54 82	0.3 205	116 62 37	536 483 457	341 100 64
53 20	0.021 8.2	-5 0.079883	4.7 -178	205 41 62	94 741 274	1134 38 84	0.4 159	101 55 45	479 374 337	297 112 57

RUN POINT	V/OR VKTS	ALFS,U CTH/S	MRFLAP1 MRPR3 (MEAN)	MRNB1A MRNB2 MRNB3 (MEAN)	MREB1A MREB2 MREB3 (MEAN)	MREB4A MRNB7 MRNB9A (MEAN)	MRFLAP1 MRPR3 (1/2P-P)	MRNB1A MRNB2 MRNB3 (1/2P-P)	MREB1A MREB2 MREB3 (1/2P-P)	MREB4A MRNB7 MRNB9A (1/2P-P)
53	0.014	-5	4.6	211	117	1162	0.5	154	350	319
21	5.7	0.079123	-172	43	764	26	160	108	339	117
				63	294	81		80	354	73
32	0	-2	4.7	203	98	1228	1	188	489	540
20	0	0.080324	-233	45	734	52	154	168	488	161
				189	210	89		247	486	91
32	0.02	-2	4.8	197	60	1204	0.4	119	501	380
21	8.1	0.080711	-221	38	705	51	174	66	445	108
				245	173	88		51	460	62
32	0.04	-2	4.9	195	24	1142	0.4	114	654	552
22	16.1	0.080631	-205	37	659	78	256	72	639	152
				246	123	74		55	686	79
32	0.04	-2	4.9	195	23	1140	0.4	113	655	567
23	16.1	0.080698	-198	38	654	78	256	72	644	151
				243	126	75		56	705	78
32	0.06	-2	4.9	192	28	1202	0.8	164	702	735
24	24	0.080626	-145	32	668	25	296	141	706	206
				224	168	54		121	821	103
32	0.08	-2	4.9	193	24	1225	0.8	205	749	835
25	32	0.080393	-107	28	679	-15	303	179	800	220
				222	214	34		149	881	112



RUN POINT	V/OR VKTS	ALFS,U CTH/S	MRFLAPI MRPR3	MRNB1A			MREB1A			MREB4A			MRNB1A			MREB1A			MREB4A		
				MRNB2	MRNB3	(MEAN)	MRNB2	MRNB3	(MEAN)	MRNB2	MRNB3	(MEAN)	MRNB2	MRNB3	(1/2P-P)	MRNB2	MRNB3	(1/2P-P)	MRNB2	MRNB3	(1/2P-P)
32	0.1	-2	5	191	13	1253	0.7	248	773												
26	40	0.079896	-87	24	676	-36	288	182	204												
				108	224	20		143	115												
32	0.125	-2	5	185	-2	1266	0.6	155	640												
27	50.1	0.080465	-86	19	670	-50	291	124	164												
				248	226	12		102	87												
32	0.201	-2	5	178	-13	1280	0.4	140	515												
28	80.4	0.079693	-76	16	664	-72	267	95	162												
				201	235	5		93	101												
32	0.251	-2	5	178	-7	1288	0.4	131	615												
29	100.1	0.08008	-85	16	673	-80	257	99	174												
				156	250	3		111	93												
32	0.1	-2	5	192	20	1253	0.8	242	795												
30	40	0.080408	-114	25	682	-34	297	181	203												
				156	225	21		140	113												
32	0.08	-2	4.9	193	32	1218	0.8	195	820												
31	32.1	0.080297	-139	28	681	-13	316	174	215												
				161	213	36		145	109												
32	0.03	-2	4.8	195	36	1124	0.4	127	387												
32	12.2	0.079146	-226	38	670	73	205	70	129												
				179	144	85		39	69												

RUN POINT	V/OR VKTS	ALFS,U CTH/S	MRFLAP1 MRPR3 (MEAN)	MRNB1A MRNB2 MRNB3 (MEAN)	MREB1A MREB2 MREB3 (MEAN)	MREB4A MRNB7 MRNB9A (MEAN)	MRFLAP1 MRPR3 (1/2P-P)	MRNB1A MRNB2 MRNB3 (1/2P-P)	MREB1A MREB2 MREB3 (1/2P-P)	MREB4A MRNB7 MRNB9A (1/2P-P)
35 5	0.251 99.4	-2.01 0.0804	5.1 -117	175 15 23	25 724 385	1318 -81 -1	0.5 254	125 99 118	583 564 649	634 177 94
35 6	0.222 88.2	-2.01 0.080721	5.1 -110	174 14 22	24 719 379	1312 -79 -1	0.4 257	125 96 92	570 512 600	547 162 91
35 7	0.198 78.7	-2.01 0.080072	5.1 -108	174 15 21	19 712 378	1314 -73 -1	0.4 280	175 103 91	588 576 618	533 164 100
35 8	0.173 68.7	-2.01 0.080128	5.1 -106	175 16 21	20 709 371	1308 -65 -1	0.4 288	94 73 74	597 592 606	519 150 80
35 9	0.151 60.1	-2.01 0.079704	5.1 -107	175 16 20	24 711 371	1302 -60 1	0.5 280	107 90 81	627 618 663	560 158 73
35 10	0.125 49.8	-2.01 0.080296	5.1 -115	179 18 25	29 715 367	1297 -51 6	0.6 289	168 119 103	678 693 717	642 167 90
35 11	0.102 40.4	-2.01 0.080298	5 -124	183 21 28	41 719 358	1280 -38 14	0.7 290	242 179 142	721 795 845	776 200 112

RUN POINT	V/OR VKTS	ALFS,U CTH/S	MRFLAP1 MRPR3 (MEAN)	MRNB1A MRNB2 MRNB3 (MEAN)	MREB1A MREB2 MREB3 (MEAN)	MREB4A MRNB7 MRNB9A (MEAN)	MRFLAP1 MRPR3 (1/2P-P)	MRNB1A MRNB2 MRNB3 (1/2P-P)	MREB1A MREB2 MREB3 (1/2P-P)	MREB4A MRNB7 MRNB9A (1/2P-P)
35	0.092	-2.01	5	185	48	1266	0.8	237	742	820
12	36.4	0.08061	-134	25	719	-29	301	190	843	212
				32	349	19		157	891	114
35	0.082	-2.01	5	184	53	1257	0.9	205	740	826
13	32.8	0.079749	-143	25	723	-19	312	187	812	219
				34	347	26		152	889	113
35	0.072	-2.01	5	187	57	1234	0.8	208	733	855
14	28.6	0.080315	-160	28	721	-2	297	165	796	216
				38	333	38		144	916	113
35	0.061	-2.01	5	186	59	1198	0.8	171	699	750
15	24.2	0.080489	-179	30	714	24	288	147	738	209
				43	308	50		126	839	105
35	0.052	-2.01	4.9	185	54	1163	0.6	146	648	687
16	20.5	0.079695	-196	32	704	49	284	114	635	185
				46	273	57		96	740	105
35	0.042	-2.01	4.9	185	55	1129	0.4	119	672	583
17	16.5	0.080049	-214	35	695	73	257	80	673	162
				50	247	68		59	734	85
35	0.031	-2.01	4.9	185	57	1125	0.4	129	549	400
18	12.4	0.079912	-226	37	694	76	209	74	498	137
				52	243	78		40	521	72

RUN POINT	V/OR VKTS	ALFS,U CTH/S	MRFLAP1 MRPR3 (MEAN)	MRNB1A MRNB2 MRNB3 (MEAN)	MREB1A MREB2 MREB3 (MEAN)	MREB4A MRNB7 MRNB9A (MEAN)	MRFLAP1 MRPR3 (1/2P-P)	MRNB1A MRNB2 MRNB3 (1/2P-P)	MREB1A MREB2 MREB3 (1/2P-P)	MREB4A MRNB7 MRNB9A (1/2P-P)
35	0.031	-2.01	4.9	185	55	1122	0.4	128	552	401
19	12.3	0.080014	-226	37	692	77	211	70	504	138
				53	240	78		39	519	72
48	0.013	0	4.8	211	117	1204	0.9	179	359	468
5	5.2	0.080247	-241	44	775	45	146	125	373	141
				56	319	88		174	458	73
48	0.021	0	4.8	205	93	1182	0.6	111	538	357
6	8.4	0.082654	-240	42	751	51	183	69	497	115
				67	289	82		267	481	63
48	0.031	0	5	207	61	1116	0.4	142	567	422
7	12.3	0.083695	-245	45	706	82	219	79	523	143
				70	231	79		180	546	72
48	0.04	0	4.9	197	51	1110	0.4	134	658	563
8	16	0.080305	-228	38	699	80	249	83	664	161
				56	228	68		192	699	82
48	0.05	0	4.8	195	47	1150	0.6	169	669	721
9	20.1	0.079955	-207	34	708	51	285	130	651	202
				37	257	56		120	769	111
48	0.061	0	4.9	195	54	1181	0.8	200	734	909
10	24.3	0.080292	-180	31	715	11	307	175	773	235
				31	283	44		164	928	111

RUN POINT	V/OR VKTS	ALFS,U CTH/S	MRFLAP1 MRPR3 (MEAN)	MRNB1A MRNB2 MRNB3 (MEAN)	MREB1A MREB2 MREB3 (MEAN)	MREB4A MRNB7 MRNB9A (MEAN)	MRFLAP1 MRPR3 (1/2P-P)	MRNB1A MRNB2 MRNB3 (1/2P-P)	MREB1A MREB2 MREB3 (1/2P-P)	MREB4A MRNB7 MRNB9A (1/2P-P)
48 11	0.071 28.6	0 0.079774	4.9 -157	193 26 23	49 725 300	1220 -13 31	0.8 299	219 200 169	776 844 942	914 240 126
48 12	0.091 36.5	0 0.079953	5 -133	190 20 13	39 725 329	1253 -34 14	0.7 319	288 222 167	771 870 869	861 217 126
48 13	0.1 40	0 0.079907	5 -124	185 16 9	36 727 340	1264 -42 10	0.6 290	303 215 148	756 848 840	773 208 126
48 14	0.124 49.6	0.02 0.080033	5 -111	180 12 4	21 716 354	1273 -54 2	0.5 280	145 107 101	632 599 603	559 158 90
48 15	0.15 59.9	0 0.079852	5.1 -102	181 12 1	5 705 357	1287 -63 -1	0.4 274	126 80 78	594 562 660	529 156 98
48 16	0.2 79.9	0 0.079954	5.1 -97	176 10 0	-15 695 349	1294 -82 -4	0.4 261	153 102 94	605 621 615	604 156 100
48 17	0.251 100.1	0 0.079969	5.1 -103	174 8 -1	-13 694 345	1274 -87 -5	0.5 229	125 117 115	575 535 704	629 176 87

RUN POINT	V/OR VKTS	ALFS,U C TH/S	MRFLAP1 MRPR3 (MEAN)	MRNB1A MRNB2 MRNB3 (MEAN)	MREB1A MREB2 MREB3 (MEAN)	MREB4A MRNB7 MRNB9A (MEAN)	MRFLAP1 MRPR3 (1/2P-P)	MRNB1A MRNB2 MRNB3 (1/2P-P)	MREB1A MREB2 MREB3 (1/2P-P)	MREB4A MRNB7 MRNB9A (1/2P-P)
48	0.251	0	5.1	174	-12	1274	0.4	127	576	627
18	100.1	0.07979	-102	8	694	-87	230	116	538	175
				-1	346	-5		112	696	87
48	0.2	0	5.1	177	-13	1282	0.4	163	604	599
19	79.9	0.080118	-101	11	691	-81	261	104	617	156
				1	346	-3		94	615	100
48	0.151	0	5.1	181	6	1281	0.4	130	589	545
20	60.4	0.080085	-104	12	705	-63	268	80	554	158
				3	355	-1		79	674	91
48	0.125	0	5	180	21	1261	0.5	139	633	556
21	50.1	0.07986	-114	12	714	-54	278	105	607	160
				5	351	3		92	600	88
48	0.102	0	5	185	39	1248	0.7	271	767	762
22	40.7	0.079959	-128	17	723	-43	296	195	858	202
				11	329	10		140	821	118
48	0.102	0	5	185	35	1249	0.6	279	762	751
23	40.7	0.079748	-126	16	720	-43	302	200	850	202
				10	323	10		144	819	117
48	0.091	0	4.9	188	43	1241	0.9	284	770	855
24	36.5	0.079583	-135	20	720	-34	304	217	859	215
				13	317	15		165	864	126

RUN POINT	V/OR VKTS	ALFS,U CTHS	MRFLAP1 MRPR3 (MEAN)	MRNB1A MRNB2 MRNB3 (MEAN)	MREB1A MREB2 MREB3 (MEAN)	MREB4A MRNB7 MRNB9A (MEAN)	MRFLAP1 MRPR3 (1/2P-P)	MRNB1A MRNB2 MRNB3 (1/2P-P)	MREB1A MREB2 MREB3 (1/2P-P)	MREB4A MRNB7 MRNB9A (1/2P-P)
48	0.071	0	4.9	195	52	1192	0.9	223	780	937
25	28.2	0.08	-164	28	715	-12	306	196	857	241
				24	286	33		169	969	127
48	0.061	0	4.9	194	55	1162	0.9	193	737	893
26	24.4	0.07937	-184	30	711	12	304	165	781	232
				29	270	44		148	919	114
48	0.051	0	4.9	194	47	1122	0.7	180	683	738
27	20.4	0.079627	-209	33	697	49	298	140	693	197
				34	236	56		107	805	107
48	0.041	0	4.9	195	45	1078	0.4	120	661	566
28	16.4	0.0794	-231	37	682	78	250	76	663	157
				40	207	69		57	709	78
48	0.031	0	4.9	198	49	1079	0.3	133	548	413
29	12.4	0.080542	-241	40	683	77	207	74	486	142
				42	211	77		41	517	73
48	0.021	0	4.8	195	72	1132	0.4	132	484	317
30	8.4	0.08018	-238	37	717	49	160	78	385	104
				40	257	82		46	341	61
48	0.012	0	4.7	207	110	1166	0.8	162	334	444
31	4.8	0.0812	-240	46	748	42	118	109	399	113
				43	280	83		90	433	69

RUN POINT	V/OR VKTS	ALFS,U CTH/S	MRFLAP1 MRPR3 (MEAN)	MRNB1A MRNB2 MRNB3 (MEAN)	MREB1A MREB2 MREB3 (MEAN)	MREB4A MRNB7 MRNB9A (MEAN)	MRFLAP1 MRPR3 (1/2P-P)	MRNB1A MRNB2 MRNB3 (1/2P-P)	MREB1A MREB2 MREB3 (1/2P-P)	MREB4A MRNB7 MRNB9A (1/2P-P)
39 6	0.25 99.3	5 0.079999	5.2 -54	161 -10 -9	-96 654 380	1359 -109 -8	0.7 237	178 137 140	569 638 764	653 161 60
39 7	0.223 89	5 0.080227	5.2 -55	166 -5 -6	-78 666 384	1363 -107 -8	0.5 235	129 106 118	573 593 704	642 143 67
39 8	0.198 78.9	5 0.080578	5.2 -53	168 -2 -3	-71 669 380	1361 -101 -7	0.5 231	97 79 96	536 510 598	530 131 58
39 9	0.174 69.3	5 0.080605	5.2 -55	170 0 -2	-51 678 384	1358 -94 -6	0.6 233	147 93 75	563 512 557	493 131 66
39 10	0.151 60.1	5 0.080486	5.1 -59	170 0 0	-38 689 389	1356 -88 -5	0.4 233	113 81 73	562 497 493	451 131 64
39 11	0.124 49.7	5 0.079896	5.1 -74	168 -2 0	-16 711 402	1358 -74 0	0.5 223	179 99 81	582 545 571	456 141 95
39 12	0.101 40.3	5 0.080237	5 -95	167 -2 5	14 732 401	1325 -58 4	0.5 269	239 140 118	600 567 596	484 176 118



RUN POINT	V/OR VKTS	ALFS,U CTH/S	MRFLAP1 MRPR3	MRNB1A MRNB2 MRNB3 (MEAN)	MREB1A MREB2 MREB3 (MEAN)	MREB4A MRNB7 MRNB9A (MEAN)	MRFLAP1 MRPR3 (1/2P-P)	MRNB1A MRNB2 MRNB3 (1/2P-P)	MREB1A MREB2 MREB3 (1/2P-P)	MREB4A MRNB7 MRNB9A (1/2P-P)
39 13	0.091 36.3	5 0.080503	5 -102	168 2 11	40 743 402	1305 -51 8	0.7 353	296 216 154	627 658 695	569 199 105
39 14	0.081 32.3	5 0.080979	5 -118	171 5 18	48 751 387	1297 -43 12	0.8 311	412 304 185	714 800 831	750 256 103
39 15	0.071 28.3	5 0.080346	5 -128	178 15 25	64 748 362	1297 -34 19	0.9 317	392 303 219	762 823 1030	921 299 130
39 16	0.041 16.2	5 0.081872	5 -217	196 42 60	56 692 226	1127 81 66	0.5 279	202 130 91	693 723 811	682 203 105
39 17	0.03 12	5 0.080573	4.9 -235	192 40 58	47 694 214	1135 90 78	0.4 248	122 74 51	616 586 627	513 149 75
39 18	0.021 8.2	5 0.08019	4.8 -227	190 38 56	72 727 265	1186 58 80	0.4 204	144 84 54	550 473 496	418 126 78
39 19	0.011 4.2	5 0.08113	4.9 -231	208 51 65	123 763 296	1207 43 88	0.7 127	213 173 111	278 338 360	420 156 79

RUN POINT	V/OR VKTS	ALFS,U CTH/S	MRFLAP1 MRPR3 (MEAN)	MRNB1A MRNB2 MRNB3 (MEAN)	MREB1A MREB2 MREB3 (MEAN)	MREB4A MRNB7 MRNB9A (MEAN)	MRFLAP1 MRPR3 (1/2P-P)	MRNB1A MRNB2 MRNB3 (1/2P-P)	MREB1A MREB2 MREB3 (1/2P-P)	MREB4A MRNB7 MRNB9A (1/2P-P)
39	0.011	5	4.8	205	114	1214	0.7	165	300	469
20	4.2	0.081376	-233	50	757	49	132	125	373	128
				62	294	88		104	417	80
41	0.252	10	5.6	163	-172	1369	0.7	172	621	683
5	100.1	0.083611	-18	-21	585	-124	286	141	679	160
				-26	338	-11		152	811	55
41	0.23	10	5.5	165	-154	1378	0.7	163	603	642
6	91.6	0.081639	-13	-18	603	-122	263	132	642	150
				-23	347	-11		128	739	49
41	0.2	10	5.3	166	-131	1383	0.6	137	586	582
7	80.1	0.079632	-15	-15	622	-117	241	108	613	124
				-20	356	-9		108	710	39
41	0.179	10	5.3	169	-116	1367	0.6	101	584	554
8	71.1	0.080441	-22	-10	624	-110	237	91	583	109
				-16	354	-8		90	655	44
41	0.151	10	5.3	171	-91	1362	0.7	81	562	441
9	60.2	0.080728	-36	-8	643	-99	235	76	551	93
				-10	355	-6		83	563	41
41	0.125	10	5.2	168	-69	1349	0.6	153	535	391
10	49.8	0.08061	-49	-8	657	-92	210	124	481	102
				-9	360	-4		101	496	52

RUN POINT	V/OR VKTS	ALFS,U CTH/S	MRFLAP1 MRPR3 (MEAN)	MRNB1A MRNB2 MRNB3 (MEAN)	MREB1A MREB2 MREB3 (MEAN)	MREB4A MRNB7 MRNB9A (MEAN)	MRFLAP1 MRPR3 (1/2P-P)	MRNB1A MRNB2 MRNB3 (1/2P-P)	MREB1A MREB2 MREB3 (1/2P-P)	MREB4A MRNB7 MRNB9A (1/2P-P)
41	0.101	10	5.1	167	-24	1381	0.7	250	561	402
11	40.3	0.080406	-68	-11	714	-78	333	153	536	125
				-8	397	1		104	476	72
41	0.091	10	5.1	163	-17	1338	0.6	182	537	422
12	36.4	0.08092	-83	-11	708	-68	253	117	451	107
				-8	395	3		108	484	82
41	0.081	10	5.1	165	23	1324	0.7	416	666	580
13	32.3	0.080306	-95	-8	738	-58	326	254	722	167
				0	389	7		151	713	112
41	0.041	10	5	199	62	10099	0.7	199	676	762
14	16.2	0.080581	-203	42	682	52	296	159	721	261
				58	214	51		125	804	121
41	0.029	10	4.9	197	48	10079	0.4	118	628	506
15	11.6	0.080226	-237	43	668	89	246	71	620	160
				60	191	74		54	628	77
41	0.019	10	4.8	199	71	10172	0.5	145	557	327
16	7.5	0.081095	-240	42	711	58	194	81	471	130
				58	244	83		74	417	77
41	0	10	4.9	211	75	10103	0.9	182	466	361
17	0	0.081806	-240	55	702	49	177	137	440	150
				67	234	92		102	426	76

RUN POINT	V/OR VKTS	ALFS,U CTH/S	MRFLAP1 MRPR3 (MEAN)	MRNB1A MRNB2 MRNB3 (MEAN)	MREB1A MREB2 MREB3 (MEAN)	MREB4A MRNB7 MRNB9A (MEAN)	MRFLAP1 MRPR3 (1/2P-P)	MRNB1A MRNB2 MRNB3 (1/2P-P)	MREB1A MREB2 MREB3 (1/2P-P)	MREB4A MRNB7 MRNB9A (1/2P-P)
41	0.01	10	4.8	210	84	10106	1.1	211	451	352
18	4.2	0.078567	-242	57	706	56	145	159	463	120
				69	231	98		97	396	89
31	0.251	10.01	5.6	148	-158	1444	0.6	162	627	687
17	100.1	0.082746	-2	-27	620	-124	255	137	675	166
				2356	384	-64		0	816	49
31	0.201	10.01	5.6	159	-130	1434	0.7	136	575	545
18	80	0.083472	-8	-15	633	-117	241	107	589	127
				2078	384	-61		472	668	44
31	0.151	10.01	5.5	165	-90	1427	0.6	82	553	419
19	60.5	0.084241	-28	-9	661	-99	236	76	514	97
				2352	385	-8		354	542	42
31	0.125	10.01	5.5	164	-65	1415	0.7	161	536	360
20	49.9	0.08413	-41	-9	679	-91	209	124	483	111
				2352	393	-41		506	469	61
31	0.1	10.01	5.4	164	-21	1427	0.7	273	592	452
21	40.1	0.083976	-64	-10	726	-75	243	168	589	130
				2035	429	-53		936	544	71
31	0.08	10.01	5.3	163	33	1375	0.6	449	706	636
22	32	0.084211	-89	-7	759	-56	324	283	783	186
				1758	431	-47		1117	794	125

RUN POINT	V/OR VKTS	ALFS,U CTH/S	MRFLAP1 MRPR3 (MEAN)	MRNB1A MRNB2 MRNB3 (MEAN)	MREB1A MREB2 MREB3 (MEAN)	MREB4A MRNB7 MRNB9A (MEAN)	MRFLAP1 MRPR3 (1/2P-P)	MRNB1A MRNB2 MRNB3 (1/2P-P)	MREB1A MREB2 MREB3 (1/2P-P)	MREB4A MRNB7 MRNB9A (1/2P-P)
37 19	0.252 100.4	-10 0.09972	5.7 -148	245 81 84	144 763 309	1230 -46 17	0.9 353	162 108 111	714 763 955	847 196 67
37 20	0.2 80.1	-10 0.100693	5.8 -126	243 77 79	110 741 287	1247 -38 17	0.8 340	142 92 90	660 666 817	729 166 70
37 21	0.151 60.2	-10 0.100604	5.9 -79	242 73 75	102 728 283	1235 -20 25	0.7 347	132 92 92	624 605 711	615 167 80
37 22	0.125 49.9	-10 0.100762	5.9 -76	244 72 74	106 728 283	1224 -10 34	0.8 353	133 102 96	636 591 674	587 171 90
37 23	0.101 40.3	-10 0.100291	5.9 -89	243 72 74	107 725 274	1205 6 49	0.8 346	130 86 87	616 572 639	540 165 98
37 24	0.091 36.4	-10 0.100286	5.9 -84	241 71 75	103 719 264	1190 18 57	0.7 392	131 70 73	627 564 606	557 155 103
37 25	0.081 32.4	-10 0.099795	5.8 -99	240 70 75	94 717 252	1184 35 65	0.6 331	123 60 61	600 527 572	518 143 105

RUN POINT	V/OR VKTS	ALFS,U CTH/S	MRFLAP1 MRPR3 (MEAN)	MRNB1A MRNB2 MRNB3 (MEAN)	MREB1A MREB2 MREB3 (MEAN)	MREB4A MRNB7 MRNB9A (MEAN)	MRFLAP1 MRPR3 (1/2P-P)	MRNB1A MRNB2 MRNB3 (1/2P-P)	MREB1A MREB2 MREB3 (1/2P-P)	MREB4A MRNB7 MRNB9A (1/2P-P)
37	0.06	-10	5.8	238	80	1131	0.5	136	609	483
26	24	0.100432	-121	71	695	67	309	68	548	149
				79	219	78		50	594	90
37	0.05	-10	5.8	239	71	1106	0.4	131	622	495
27	20.1	0.100496	-125	73	683	77	293	64	591	139
				82	199	83		47	629	84
37	0.041	-10	5.8	238	68	1101	0.4	130	607	454
28	16.3	0.100026	-137	74	682	83	274	62	556	124
				84	191	91		45	582	75
37	0.03	-10	5.8	242	101	1131	0.3	112	562	402
29	11.8	0.100486	-133	75	710	71	232	49	504	107
				84	226	98		43	506	60
37	0.02	-10	5.8	245	113	1156	0.6	154	541	397
30	7.9	0.10059	-138	77	727	62	208	100	484	121
				88	248	92		70	500	66
37	0.013	-10	5.7	258	159	1178	1.1	154	440	492
31	5.2	0.100229	-152	87	760	58	147	113	448	138
				95	271	94		85	527	95
33	0.251	-2	6.1	219	44	1323	0.6	188	683	842
5	100.1	0.100158	-148	46	717	-81	329	127	735	212
				51	328	4		128	897	119

RUN POINT	V/OR VKTS	ALFS,U CTH/S	MRFLAP1 MRPR3 (MEAN)	MRNB1A MRNB2 MRNB3 (MEAN)	MREB1A MREB2 MREB3 (MEAN)	MREB4A MRNB7 MRNB9A (MEAN)	MRFLAP1 MRPR3 (1/2P-P)	MRNB1A MRNB2 MRNB3 (1/2P-P)	MREB1A MREB2 MREB3 (1/2P-P)	MREB4A MRNB7 MRNB9A (1/2P-P)
33 6	0.201 80.2	-2 0.100369	6.1 -137	222 48 88	53 718 328	1326 -72 5	0.5 348	218 142 108	677 731 838	797 206 128
33 7	0.15 60	-2 0.100376	6.1 -141	225 49 61	67 728 358	1317 -54 15	0.6 356	148 107 95	705 734 806	750 197 107
33 8	0.126 50.2	-2 0.100913	6.1 -154	228 51 59	66 725 329	1304 -43 24	0.7 425	243 176 131	738 755 849	806 213 116
33 9	0.107 42.5	-2 0.099783	6 -162	229 54 63	69 720 317	1282 -30 33	0.9 361	303 226 162	781 819 931	902 234 125
33 10	0.06 24	-2 0.099461	5.9 -227	238 65 82	93 714 228	1164 49 100	0.7 352	196 158 120	713 746 874	859 225 133
33 11	0.05 20	-2 0.100022	5.9 -249	239 69 87	80 690 192	1110 76 156	0.5 345	159 117 98	635 595 684	663 195 105
33 12	0.04 16	-2 0.100006	5.9 -267	238 72 91	76 675 172	1076 101 165	0.4 289	128 70 55	650 613 688	575 165 85

RUN POINT	V/OR VKTS	ALFS,U CTH/S	MRFLAP1 MRPR3 (MEAN)	MRNB1A MRNB2 MRNB3 (MEAN)	MREB1A MREB2 MREB3 (MEAN)	MREB4A MRNB7 MRNB9A (MEAN)	MRFLAP1 MRPR3 (1/2P-P)	MRNB1A MRNB2 MRNB3 (1/2P-P)	MREB1A MREB2 MREB3 (1/2P-P)	MREB4A MRNB7 MRNB9A (1/2P-P)
33	0.031	-2	5.8	238	94	1113	0.4	129	577	424
13	12.2	0.100156	-271	72	700	88	265	71	506	125
				91	206	172		47	535	68
33	0.02	-2	5.8	244	130	1176	0.4	168	578	452
14	8.1	0.100851	-270	75	744	65	229	106	563	132
				92	249	174		66	591	72
33	0	-2	5.5	248	137	1155	1.3	232	465	721
15	0	0.098874	-272	81	740	76	166	171	576	197
				294	185	178		113	709	106
35	0.251	-2	6.2	216	52	1316	0.7	187	676	838
20	99.6	0.100138	-139	43	713	-83	345	117	723	211
				46	331	4		130	890	120
35	0.224	-2	6.2	219	58	1307	0.6	162	638	691
21	89	0.101098	-136	45	714	-81	355	119	668	193
				47	357	6		111	826	113
35	0.198	-2	6.2	219	63	1316	0.5	222	681	803
22	78.9	0.1001	-131	46	716	-73	355	140	756	210
				42	339	8		108	840	130
35	0.174	-2	6.2	223	71	1307	0.5	155	678	746
23	69.1	0.100757	-128	47	719	-64	362	106	710	192
				44	345	12		93	857	98



RUN POINT	V/OR VKTS	ALFS,U CTH/S	MRFLAP1 MRPR3 (MEAN)	MRNB1A MRNB2 MRNB3 (MEAN)	MREB1A MREB2 MREB3 (MEAN)	MREB4A MRNB7 MRNB9A (MEAN)	MRFLAP1 MRPR3 (1/2P-P)	MRNB1A MRNB2 MRNB3 (1/2P-P)	MREB1A MREB2 MREB3 (1/2P-P)	MREB4A MRNB7 (1/2P-P)
35	0.151	-2	6.2	224	76	1304	0.6	147	690	727
24	60.2	0.100339	-131	47	722	-57	356	108	714	198
				44	355	16		93	789	106
35	0.125	-2	6.2	227	73	1291	0.8	258	725	802
25	49.7	0.100666	-145	49	720	-44	352	187	777	216
				48	342	24		137	851	120
35	0.113	-2	6.1	224	73	1280	0.8	303	768	873
26	45.2	0.098773	-146	48	718	-37	349	215	816	227
				49	328	28		154	928	126
35	0.06	-2	6	237	104	1130	0.7	196	722	809
27	23.9	0.10062	-224	67	700	53	354	158	725	217
				72	230	75		121	851	119
35	0.05	-2	6	238	97	1097	0.6	160	650	661
28	20	0.100328	-243	69	692	80	336	111	623	195
				77	210	84		95	702	104
35	0.042	-2	6	238	95	1070	0.5	139	636	563
29	16.7	0.100714	-260	72	682	101	311	70	608	169
				81	185	92		57	665	90
35	0.031	-2	5.9	240	118	1130	0.4	125	549	401
30	12.2	0.100243	-263	71	722	83	265	73	465	123
				80	231	98		51	502	69

RUN POINT	V/OR VKTS	ALFS,U CTH/S	MRFLAP1 MRPR3 (MEAN)	MRNB1A MRNB2 MRNB3 (MEAN)	MREB1A MREB2 MREB3 (MEAN)	MREB4A MRNB7 MRNB9A (MEAN)	MRFLAP1 MRPR3 (1/2P-P)	MRNB1A MRNB2 MRNB3 (1/2P-P)	MREB1A MREB2 MREB3 (1/2P-P)	MREB4A MRNB7 MRNB9A (1/2P-P)
39	0.249	5	6.4	193	-74	1367	0.5	153	630	779
21	99.2	0.099721	-80	14	639	-110	273	138	718	188
				6	335	-2		146	869	71
39	0.223	5	6.4	200	-51	1382	0.5	123	638	755
22	89	0.10008	-77	19	659	-112	274	109	669	166
				10	349	-3		119	832	82
39	0.198	5	6.3	202	-53	1374	0.5	148	636	674
23	78.7	0.100077	-75	22	655	-105	281	97	636	161
				11	347	-3		103	758	79
39	0.173	5	6.3	207	-22	1381	0.5	160	630	654
24	69	0.100694	-81	25	674	-98	371	105	570	173
				15	362	-3		93	662	86
39	0.151	5	6.3	208	-8	1392	0.5	160	616	613
25	60.1	0.100203	-84	25	691	-89	341	106	599	171
				15	376	1		85	676	79
39	0.124	5	6.2	205	18	1386	0.5	276	674	728
26	49.7	0.099859	-101	22	720	-71	279	132	678	188
				15	394	7		101	748	149
39	0.101	5	6.1	207	58	1339	0.7	420	725	798
27	40.2	0.09994	-127	27	740	-52	351	273	825	226
				26	386	14		188	957	136

RUN POINT	V/OR VKTS	ALFS,U CTH/S	MRFLAP1 MRPR3 (MEAN)	MRNB1A MRNB2 MRNB3 (MEAN)	MREB1A MREB2 MREB3 (MEAN)	MREB4A MRNB7 MRNB9A (MEAN)	MRFLAP1 MRPR3 (1/2P-P)	MRNB1A MRNB2 MRNB3 (1/2P-P)	MREB1A MREB2 MREB3 (1/2P-P)	MREB4A MRNB7 MRNB9A (1/2P-P)
39	0.051	5	6.2	251	98	1106	0.8	301	794	1094
28	20.3	0.104631	-238	76	690	63	367	234	823	267
				80	211	70		163	1050	128
39	0.04	5	5.9	241	86	1071	0.5	182	637	619
29	16	0.100854	-261	73	679	111	316	101	594	192
				80	171	84		85	692	98
39	0.03	5	5.9	241	92	1103	0.3	144	662	562
30	11.9	0.10021	-268	72	696	105	274	80	679	173
				77	195	90		49	720	78
39	0.02	5	5.8	245	142	1182	0.5	149	584	457
31	8	0.100145	-261	73	754	72	244	110	541	157
				76	271	96		80	557	92
39	0.01	5	5.9	264	141	1141	1.6	196	553	669
32	3.8	0.104272	-281	91	733	86	221	149	669	173
				92	231	113		114	772	89
41	0.251	10	6.6	186	-177	10244	0.6	209	686	854
19	99.8	0.100608	-59	-5	555	-127	317	157	834	180
				-17	294	-8		166	1032	56
41	0.229	10	6.6	191	-159	10243	0.6	160	659	823
20	91.3	0.100617	-55	1	569	-127	316	139	755	163
				-11	306	-8		144	917	61

RUN POINT	V/OR VKTS	ALFS,U CTH/S	MRFLAP1 MRPR3 (MEAN)	MRNB1A MRNB2 MRNB3 (MEAN)	MREB1A MREB2 MREB3 (MEAN)	MREB4A MRNB7 MRNB9A (MEAN)	MRFLAP1 MRPR3 (1/2P-P)	MRNB1A MRNB2 MRNB3 (1/2P-P)	MREB1A MREB2 MREB3 (1/2P-P)	MREB4A MRNB7 MRNB9A (1/2P-P)
41	0.2	10	6.5	197	-133	10296	0.6	142	611	684
21	80	0.099893	-55	7	593	-121	279	110	646	143
				-7	324	-5		120	759	50
41	0.178	10	6.5	199	-109	10294	0.6	114	602	614
22	70.9	0.100064	-56	10	608	-113	278	93	589	126
				-3	336	-5		99	665	51
41	0.151	10	6.4	201	-81	10216	0.7	98	566	547
23	60.1	0.09996	-66	12	630	-104	256	82	529	117
				1	348	-3		92	599	50
41	0.125	10	6.3	200	-48	10245	0.7	143	555	478
24	49.7	0.100047	-75	11	662	-99	243	120	524	125
				1	372	1		106	530	67
41	0.101	10	6.3	199	21	10536	0.6	257	620	685
25	40.1	0.100426	-103	10	726	-77	282	189	590	129
				0	432	6		121	733	76
41	0.091	10	6.2	202	47	11420	0.8	523	836	942
26	36.2	0.100792	-103	13	742	-68	417	311	1048	211
				8	414	-47		157	1003	180
41	0.04	10	6	250	88	5051	0.6	233	692	862
27	16.1	0.100627	-243	77	656	93	441	162	736	255
				83	146	30		125	846	113

RUN POINT	V/OR VKTS	ALFS,U CTH/S	MRFLAP1 MRPR3 (MEAN)	MRNB1A MRNB2 MRNB3 (MEAN)	MREB1A MREB2 MREB3 (MEAN)	MREB4A MRNB7 MRNB9A (MEAN)	MRFLAP1 MRPR3 (1/2P-P)	MRNB1A MRNB2 MRNB3 (1/2P-P)	MREB1A MREB2 MREB3 (1/2P-P)	MREB4A MRNB7 MRNB9A (1/2P-P)
41	0.029	10	5.9	247	81	5067	0.4	142	659	732
28	11.6	0.100285	-260	77	659	106	446	78	620	166
				81	154	46		59	683	85
41	0.018	10	5.9	257	127	5167	0.8	220	600	586
29	7.1	0.101429	-259	82	717	61	435	175	533	200
				81	240	54		119	533	105
41	0	10	5.6	256	165	5199	1	194	539	828
30	0	0.100003	-253	86	746	61	279	154	652	215
				87	249	52		139	948	85

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13. ABSTRACT (Maximum 200 words) A full-scale helicopter rotor test was conducted in the NASA Ames 80- by 120-Foot Wind Tunnel with a four-bladed S-76 rotor system. Rotor performance and loads data were obtained over a wide range of rotor shaft angles-of-attack and thrust conditions at tunnel speeds ranging from 0 to 100 kt. The primary objectives of this test were (1) to acquire forward flight rotor performance and loads data for comparison with analytical results; (2) to acquire S-76 forward flight rotor performance data in the 80- by 120-Foot Wind Tunnel to compare with existing full-scale 40- by 80-Foot Wind Tunnel test data that were acquired in 1977; (3) to evaluate the acoustic capability of the 80- by 120-Foot Wind Tunnel for acquiring blade vortex interaction (BVI) noise in the low speed range and compare BVI noise with in-flight test data; and (4) to evaluate the capability of the 80- by 120-Foot Wind Tunnel test section as a hover facility. The secondary objectives were (1) to evaluate rotor inflow and wake effects (variations in tunnel speed, shaft angle, and thrust condition) on wind tunnel test section wall and floor pressures; (2) to establish the criteria for the definition of flow breakdown (condition where wall corrections are no longer valid) for this size rotor and wind tunnel cross-sectional area; and (3) to evaluate the wide-field shadowgraph technique for visualizing full-scale rotor wakes. This data base of rotor performance and loads can be used for analytical and experimental comparison studies for full-scale, four-bladed, fully articulated rotor systems. Rotor performance and structural loads data are presented in this report.				
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